

**FINAL
ENVIRONMENTAL IMPACT REPORT
MIDBAYFRONT LCP RESUBMITTAL NO. 8 AMENDMENT
VOLUME I**



**CITY OF
CHULA VISTA**

**Environmental
Impact Report**

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July 1991

FEIR
INSTRUCTION SHEET

This Final Environmental Impact Report (FEIR) for the Midbayfront LCP Resubmittal No. 8 Amendment consists of two volumes:

- *Volume I - Includes Comments and Responses received as a result of the Draft and Recirculated Environmental Impact Report (DEIR). These Comments and Responses are contained in Section 3.0 and Section 6.0, respectively. For ease of reference, comments on the Recirculated DEIR follow sequentially the lettered comments received on the original DEIR (starting with "EE"). The original or first DEIR was submitted by the City of Chula Vista for public review on August 6, 1990. Based upon the incorporation of new information and alternatives, a second public review period was held on the Recirculated DEIR between April 10, 1991 and May 22, 1991. The public review period on the Recirculated DEIR was extended until May 24, 1991 to allow additional response time for the U.S. Fish and Wildlife Service. Volume I also contains a summary of new information incorporated in the Recirculated DEIR, and an analysis of two new alternatives.*
- *Volume II - Contains text changes to the original DEIR and Recirculated DEIR. Text changes have been made based upon the comments received, as well as new information presented in Volume I. The Recirculated DEIR, Volumes I and II, the Comments and Responses, and text changes constitute the Final Environmental Impact Report (FEIR). Where revisions occurred in the DEIR text, shading is shown to highlight these changes. Changes to the Recirculated DEIR are shown in italics. Where text has been eliminated, lines are drawn through the narrative to indicate which language was deleted. Volume II also contains a re-analysis of all impacts to incorporate new information and to clarify plan-level versus project-level issues.*

Appendices also accompany the two volumes of the FEIR. The appendices are the final Technical Reports prepared by the City's EIR Project Team.

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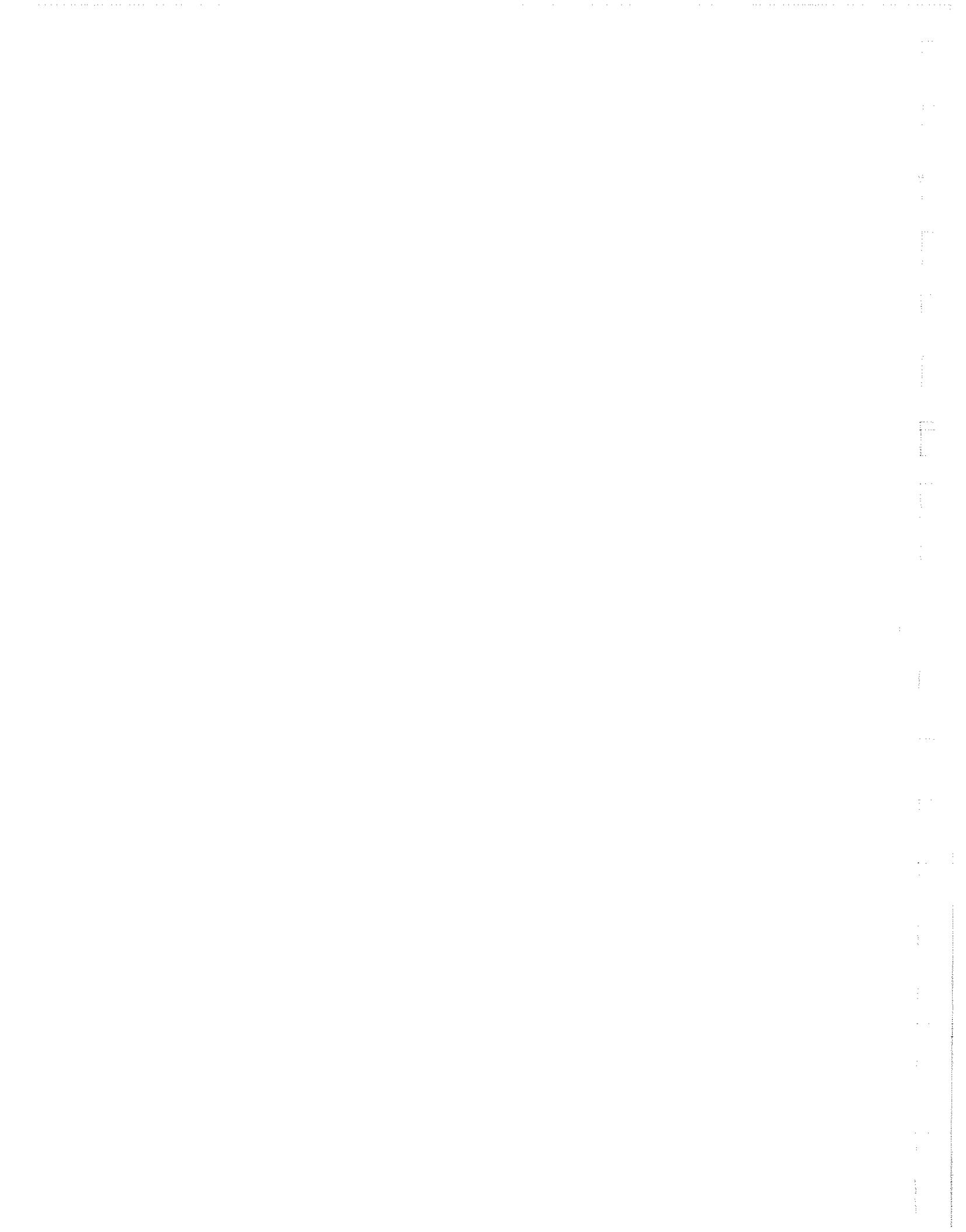


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1.0 INTRODUCTION

The Midbayfront LCP Resubmittal No. 8 Amendment Final EIR (FEIR) contains the CEQA compliance record for this plan-level action that has been processed between preparation of the NOP in June 1989 and the FEIR in June 1991. The Draft EIR was initially completed in August 1990. The public review period for the Midbayfront LCP Resubmittal No. 8 Amendment Draft EIR (DEIR) extended from August 6 through September 26, 1990. Volume I, Section 3.0, of this FEIR contains the comments received on that DEIR and responses to public comments.

In addition to responding to comments, Volume I outlines for the reader additional information and analyses prepared subsequent to the original DEIR public review period that were considered in preparing the Recirculated DEIR. These new data and environmental analyses have resulted in a re-evaluation of impacts and mitigation measures for this plan-level CEQA document. The reader should review Section 1.2 of Volume II for the summary of impacts and mitigation measures for the Midbayfront LCP Resubmittal No. 8 Amendment.

Based upon the incorporation of new information and alternatives, a second public review period was held on the Recirculated Draft EIR between April 10, 1991 and May 22, 1991. The public review period on the Recirculated Draft EIR was extended until May 24, 1991 to allow additional response time for the U.S. Fish and Wildlife Service. Section 6.0 of this FEIR contains the comments received on the Recirculated Draft EIR and responses to those comments.

2.0 NEW INFORMATION PRESENTED IN THE RECIRCULATED DRAFT EIR

2.1 DESCRIPTION OF NEW DATA SUBMITTED BY THE APPLICANT

Since the publication of the Draft EIR in August, 1990, the applicant's consultants -- Peterson and Price, the Jerde Partnership, A.D. Hinshaw Associates, GEOCON, J. Harlan Glenn Associates, Rick Engineering, Urban Systems Associates and David S. Smith and Associates have submitted new data to be considered in preparing the EIR for the Midbayfront LCP Resubmittal No. 8 Amendment. The new data submitted by the applicant include the following major components:

- A new Revised Development Plan - termed "Alternative 8" in the current DEIR. The plan includes reductions in density and building heights, increased parkland acreage and a revised phasing plan.
- New Geotechnical and Hydrology Baseline Information and Design Details - regarding groundwater supply and use of groundwater for the proposed lagoons, water quality, the lagoon design and operation, and the design and operation of the desiltation/detention basin. This information has been submitted by the applicant in response to various public comments received on the DEIR.
- Applicant Proposed Biological Mitigation Measures - including design standards and performance standards to reduce impacts reported in the DEIR.
- Applicant Proposed Traffic Mitigation Measures - including a striping plan for the "E" Street overpass and the widening of Bay Boulevard and the I-5 northbound off-ramps in order to reduce traffic impacts reported in the DEIR.

A summary of each of the new data submittals is presented below with an explanation of how and where the new information is incorporated in the DEIR.

Revised Project - Alternative 8

At the close of the public review period, the applicant presented a new revised Development Plan. The revised project was presented by the Jerde Partnership and the law offices of Peterson and Price at the public hearing on the Draft EIR (DEIR), held at the City of Chula Vista Planning Commission Meeting, on September 26, 1990. This revised project was also described in comments on the August 1990 DEIR, submitted by Chula Vista Investors and A.D. Hinshaw Associates. Comments AA1, AA2, Z1, Z24, Z51 and Z69 specifically address this new revised project.

The revised project consists of changes to the proposed project Development Plan, addressed in the DEIR as the "ultimate project action" that would be allowable under the LCP Resubmittal. Primary differences between the old proposed Development Plan and

the revised plan are shown in Table 2-1. Overall, the development plan concepts are similar. However, the revised project plan provides for reductions in the total intensity of development and selected building heights, as well as modifications to parking and the phasing plan. Increases to the amount of parkland have also been incorporated into the revised plan. Figure 2.1-I shows the revised Development Plan and project phases (the various phases are designated with capital letters).

The applicant is not proposing to modify the LCP Resubmittal No. 8 document, however. Consequently, the ultimate development that would be allowable with the adoption of the LCP Resubmittal No. 8 remains the same as was previously described in the DEIR. For these reasons, the proposed project addressed in the DEIR has not been changed. Rather, the applicant's new revised Development Plan is termed "Alternative 8" in the current DEIR and is described in Section 4.1 of this volume. The environmental effects of this new revised project are described in Volume I, Section 4.2.

New Baseline Information and Design Standards Applicable to Groundwater and Surface Water Hydrology, Water Quality

A number of impacts were identified in the DEIR as significant and not mitigable since design details and/or baseline information were not available, at the time the DEIR analysis was prepared, that substantially demonstrated that impacts could be avoided or mitigated to a level below significant. Since the publication of the DEIR, the applicant and his consultants have submitted additional information and mitigation commitments to address some of these issues. New geotechnical and hydrological information submitted by the applicant includes the following:

a) **J. Harlan Glenn and Associates - Letter dated 10/10/90**

In response to comments on the August 1, 1990 DEIR, the applicant's consultant J. Harlan Glenn has provided additional information concerning the lagoon design, the use of groundwater for the initial lagoon filling and replacement water and nutrient trapping and stripping. These data are available at the City of Chula Vista. This information has been considered by the Project Team in preparing the responses to comments on the DEIR. (See Volume I, Section 3.0.)

b) **GEOCON Environmental Consultants (GEC) - Letter dated 7/5/90**

This letter provides estimates on the average and maximum water supply requirements for the lagoons as well as the results of a production well that was installed and tested by GEC. This letter is on file at the City of Chula Vista and has been considered by the project team in preparing response to comments on the DEIR (See Volume 1, Section 3.0).

c) **GEOCON Environmental Consultants - Letter dated 9/24/90**

The applicant's consultant prepared this letter in response to issues raised in the August 1990 Draft EIR. Information provided in the letter includes data on water

Table 2-1
Comparison of Developer's Revised Project (Alternative 8)
with Original Project Addressed in Draft EIR

| | <i>Developer's Project Addressed in DEIR</i> | <i>Developer's Revised Project - Alternative 8</i> | | |
|--|--|--|---------------|----------------|
| I. Land Use Comparison | | | | |
| Total Square Feet of Development | 4.18 Million | 3.9 Million | | |
| ● Residential | 1,500,000 (1,550 units) | 1,791,000 (1,400 units) | | |
| ● Commercial Visitor | 1,896,000 (2,028 hotel units) | 1,791,000 (1,800 hotel units) 80,000 (at City-owned site) | | |
| ● Commercial Retail | 150,000 | 150,000 | | |
| ● Professional Administrative | 640,000 (inc. 500,000 s.f. for Rohr) | 560,000 (inc. 500,000 s.f. for Rohr) | | |
| Parks (acres) | 18.9 | 23.2 | | |
| Parking | 12,023 spaces | 9,932 spaces | | |
| II. Building Heights Comparison | | | | |
| <i>Building</i> | <i>Height</i> | <i>Stories</i> | <i>Height</i> | <i>Stories</i> |
| Resort Hotel | 265' | 26 | 176' | 17 |
| Luxury Hotel | 120' | 8 | 69' | 5 |
| Atrium Hotel | 265' | 26 | 229' | 22 |
| Extended Stay Hotel | 172' | 17 | 172' | 17 |
| Residential (north)† | | | | |
| Apt. Bldg. a | 44' | 2 | 53' | 4 |
| Apt. Bldg. b | 176' | 17 | 106' | 9 |
| Apt. Bldg. c | 44' | 3 | 53' | 4 |
| Apt. Bldg. d | 176' | 17 | 141' | 13 |
| Apt. Bldg. e | 44' | 3 | 53' | 4 |
| Apt. Bldg. f | 176' | 17 | 176' | 17 |
| Apt. Bldg. g | 44' | 3 | 44',53' | 3,4 |
| Residential/Commercial (central)*† | | | | |
| Tower h | 71' | 5* | 71' | 5* |
| Tower i | 71' | 5* | 71' | 5* |
| Tower j | 75' | 4** | 75' | 5** |
| Tower k | 75' | 4** | 60' | 4*** |

Source: The Jerde Partnership, Inc.

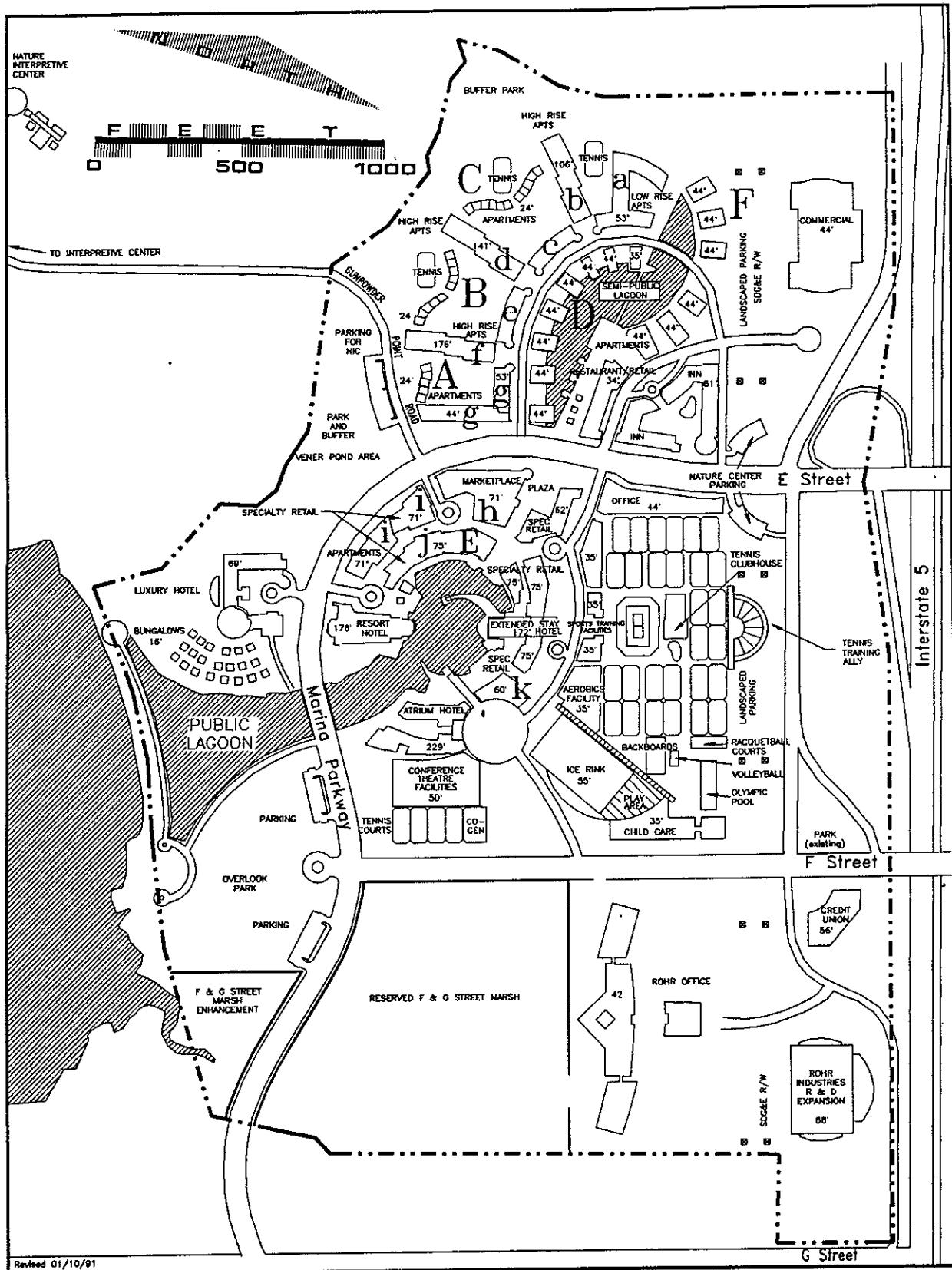
Notes: * 1 story retail/4 stories residential

** 2 story retail/3 stories residential

*** 1 story retail/3 stories residential

† See Figure 2.1-I for building designations

CURRUSUMMITAL #8



ALTERNATIVE 8

REVISED DEVELOPMENT PLAN

Figure 2.1-I

chemistry testing at well PW-A, the relationship between tidal fluctuations and groundwater level variations at well PW-A, aquifer capacity, the potential for groundwater contaminants, and water salinity and the potential for saltwater intrusion into groundwater wells. This letter is on file at the City of Chula Vista and has been considered in the response to comments in this volume (Section 3.0).

d) **GEOCON Report - "Limited Groundwater Supply Report," November, 1990.**

This hydrogeologic report details the field investigations, the results of hydraulic (well) and water chemistry testing. The study includes data interpretations, estimates on groundwater production capacity, and discussions on the various effects and impacts of groundwater pumping. Baseline information contained in the report was considered by the Project Team in preparing the responses to comments (Volume 1, Section 3.0), and is on file at the City of Chula Vista.

e) **A.D. Hinshaw Associates - Responses to Comments, dated November 4, 1990.**

The applicant's consultants, A.D. Hinshaw, et al., submitted both comments and responses to comments to the City of Chula Vista and project team for consideration in preparing the Recirculated EIR. The responses to comments were reviewed and used by the project team only to the extent that they either (1) provided new baseline information relevant to the project, and/or (2) provided new or expanded mitigation measures to which the applicant was willing to commit. The A.D. Hinshaw comments are included in Section 3.0 of this volume, Comments Z1 through Z164.

New geotechnical/hydrological information contained in the Hinshaw comments and used by the project team in preparation of this DEIR included data and mitigation measures regarding (1) design of storm drains, (2) the lagoon management and street sweeping programs, (3) water quality testing and monitoring programs for addressing dewatering and water contaminant concerns, and (4) the proposed functioning and monitoring of the detention/desilting basins to eliminate freshwater flows to the "F" & "G" Street Marsh during the dry season.

f) **Rick Engineering Company - Report dated 10/17/90**

This report provides detail on the location, operation and design of the oil grease traps, the storm water discharge system and the design and operation of the desiltation basin. This document sets forth commitments by the applicant and is considered in the responses to comments (Volume 1, Section 3.0), and is on file at the City of Chula Vista.

g) **David S. Smith and Associates - Letter dated 12/5/90**

This letter outlines the design standards and performance requirements that have been developed by the applicant's consultants, in coordination with the USFWS, to mitigate potential biological impacts to the Sweetwater Marsh NWR and sensitive resources. These measures are discussed further below. Standards are included for

surface water drainage systems, the discharge of freshwater into the "F" & "G" Street Marsh, landscaping, and a water quality monitoring plan (on file at the City of Chula Vista.). The design and performance standards have been committed to by the applicant and are therefore incorporated into this document.

New Standards Applicable to Biological Resources

Biological mitigation measures have been developed and committed to by the applicant. These standards were submitted to the City of Chula Vista on December 5, 1990. The standards consist of both "design requirements" and "performance requirements" that are intended to reduce, to the maximum extent possible, the development-related conditions or activities that may adversely affect sensitive species using wetlands and related habitats in the adjoining National Wildlife Refuge.

The standards are organized according to five issues:

- Reduction of Predator Pressures
- Reduction of Potential for Bird Strikes
- Reduction of Potential Adverse Effects of Lighting
- Control of Human Activity to Reduce Impacts on Wildlife
- Reduction of Potential Adverse Effects on Water Quality

Issues not addressed in the standards are (1) those which would require a major redesign of the project, (2) those that require details beyond the level of specificity appropriate for a plan-level EIR, and (3) those that are regional (bay-wide) or systemic, in scope, thereby requiring a multi-party or region-wide program that is beyond the scope of this project. The standards have been incorporated into the DEIR.

Applicant Proposed Traffic Mitigation Measures

The applicant's traffic and engineering consultants, Urban Systems Associates, and Rick Engineering, have prepared a proposed striping plan/lane alignment study for the "E" Street/I-5 interchange and overpass in order to mitigate traffic impacts reported in the DEIR. This plan is on file at the City of Chula Vista. The plan calls for a number of improvements that have been incorporated into this analysis:

- Restriping of the "E" Street overpass to provide a dual left-turn lane from eastbound "E" Street to northbound I-5
- Addition of a fourth lane on the future I-5 southbound off-ramp to "E" Street, and the lane alignment across "E" Street to Bay Boulevard
- Widening of Bay Boulevard by approximately 15 feet to the west, thereby providing three northbound and one southbound lane at the south leg of the Bay Boulevard/"E" Street intersection. Also shown is the minimum clearance of nine feet between the new westerly curb and the centerline of the AT&SF railroad tracks

- Widening of the I-5 northbound off-ramp at "E" Street to provide a third lane to be used as a "right-turn-only" lane in the future. Also shown are topographic elevations that indicate that the third new lane at elevation 30 feet is within ramp grade requirements when compared with the 31.8-foot elevation at the trolley tracks on "E" Street
- Revision of median and north curbs on "E" Street east of the I-5 northbound ramps to align with the revised bridge deck striping and a third westbound lane at the approach to the northbound ramp.

It is important to note that these measures do not meet City or Caltrans standards and have not been approved by either Caltrans or the City of Chula Vista at this time.

2.2 DESCRIPTION OF NEW DATA GENERATED IN RESPONSE TO PUBLIC COMMENTS

In addition to evaluating the new information submitted by the applicant, this document incorporates the following new analyses that have been completed in response to public concerns:

- **A new Alternative 9.** This has been developed and evaluated in response to a number of public comments suggesting various redesigns. These types of comments were received from the U.S. Fish and Wildlife Service, the State of California Department of Fish and Game, the Bayfront Conservancy Trust, etc. Volume I, Section 5.1 describes Alternative 9 characteristics that are intended to respond to those concerns. An environmental evaluation of Alternative 9 is subsequently presented in Section 5.2.
- **An Expansion of the Cumulative Impact Analysis.** The Cumulative Impact Analysis has been expanded to specifically address future development projects that are known to be proposed or considered in the San Diego Bay region. The cumulative impact analysis further describes how the various resource studies had incorporated cumulative issues into their DEIR analyses. The Cumulative Impact Analysis is presented in Section 9.0 of Volume II.
- **An Expanded Traffic Analysis.** JHK was directed by the City of Chula Vista to include five additional intersections and all additional arterials that would be impacted by the proposed development. In addition, the City requested that critical signalized intersections which would be impacted by future trolley gate operations be further analyzed using the "Operational Analysis" method from the 1985 Highway Capacity Manual (HCM). Thus, an analysis is presented of existing and future levels-of-service at the intersections listed below for each of the following site development scenarios: the Alternative 1 (No Build); the Developer's Original Proposal; and Alternative 8 (Developer's New Proposal) site development scenarios. The five new intersections are as follows:
 - "E" Street/Woodlawn Avenue

- "E" Street/Broadway
- "F" Street/Woodlawn Avenue
- "F" Street/Broadway
- "H" Street/Broadway

This re-analysis is contained in Volume II, and is on file at the City of Chula Vista.

- **A Refinement and Re-evaluation of Impact Significance and Mitigation Measures.** In order to incorporate the applicant's new information and to distinguish impacts that are significant and unmitigable from those that are significant and may be mitigated later at the project-level of environmental compliance, all impacts reported in the August 1990 DEIR were re-evaluated. This re-evaluation of impacts is presented in Volume II, Section 1.0 and in Table 1-1-A. Table 1-2 explains mitigation measures, including the need for additional studies and design information at the project-level of CEQA compliance.

3.0 RESPONSES TO COMMENTS

Twenty-four (24) letters and five (5) memorandums were received on the August 1990 Draft EIR from federal, state and local agencies and the public. Table 3-1 lists the sources of comments received on the Draft EIR and the letter designations referenced for each in this section of the Recirculated DEIR. The transcript of the public hearing on the August 1990 Draft EIR, held on September 26, 1990, is also incorporated in the comment record.

The preparers of the responses to comments are the same project team that prepared the Draft EIR. Responses have been provided by:

- Keller Environmental Associates, Inc. - Ms. Christine Keller
Ms. Diana Richardson
- Group Delta Consultants, Inc. - Mr. Walt Crampton
Mr. Ford Garner
- Pacific Southwest Biological Services - Mr. Keith Merkel
Mr. Jim Bahr
- JHK and Associates - Mr. Dan Marum
- Giroux & Associates - Mr. Hans Giroux

GENERAL RESPONSES

In reviewing the public comments, a number of issues have been raised that are shared by various groups and agencies. In order to best provide responses to these concerns, and minimize redundancy in the current document to the extent possible, the first part of Section 3 presents a series of General Responses to such comments. Subsequently, specific responses are provided to each comment with references back to applicable General Responses.

3.1 GENERAL RESPONSES REGARDING THE DOCUMENT AS A WHOLE

General responses related to the document as a whole have been prepared to address the following two types of concerns and comments:

- The type of CEQA document prepared and the level of information required for this EIR
- Cumulative impacts and how they are factored into the DEIR

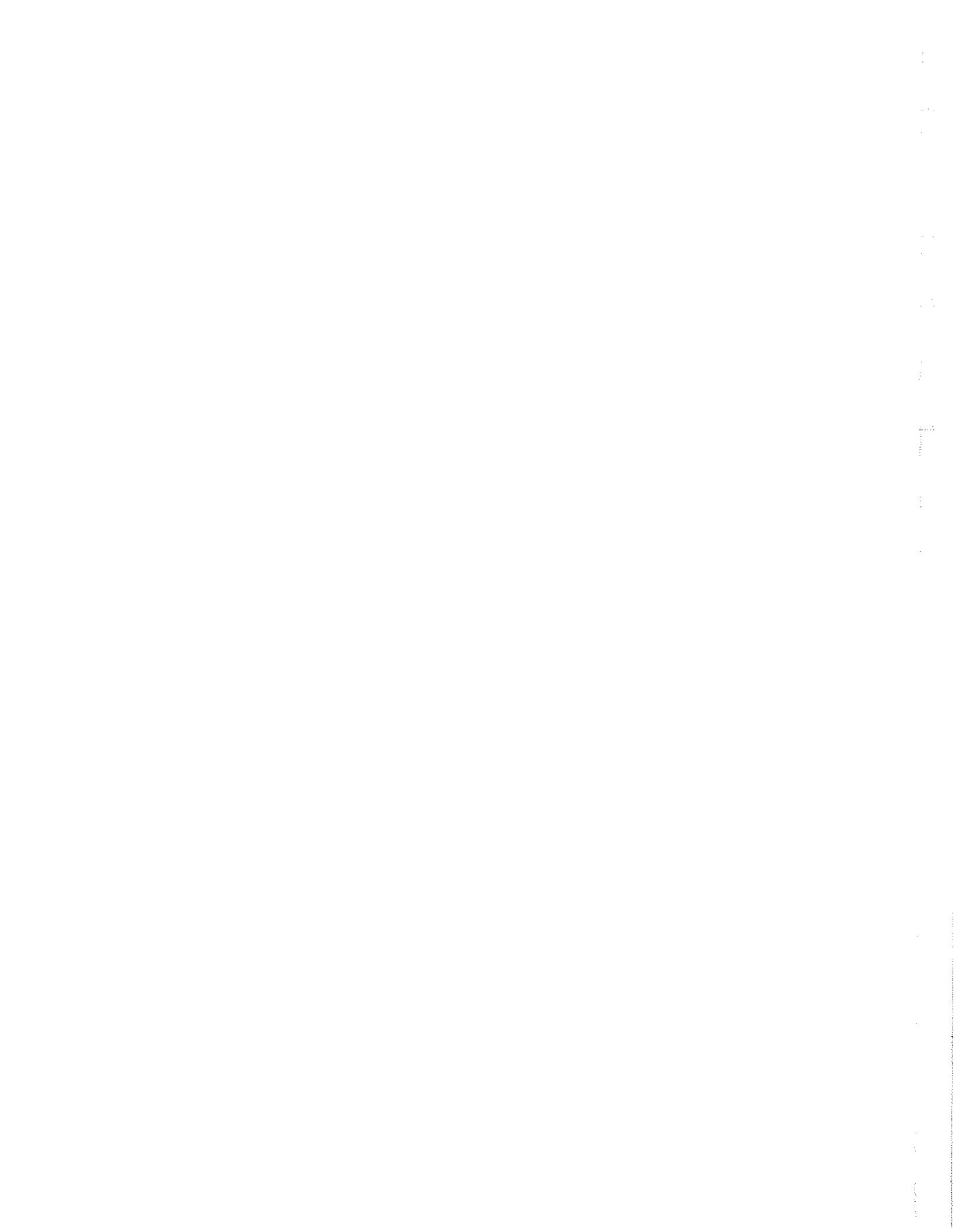


Table 3-1
Comment Letters Received on Midbayfront Draft EIR

- A. National Marine Fisheries Service (NOAA), letter from E.C. Fullerton, Regional Director, dated September 24, 1990 (2 pages).
- B. U.S. Fish & Wildlife Service, letter from Martin Kenney, Acting Office Supervisor, dated September 26, 1990 (21 pages).
- C. California Coastal Commission, letter from Deborah N. Lee, Assistant District Director, dated September 25, 1990 (4 pages).
- D. California Department of Water Resources, memorandum from Charles R. White, Chief Planning Branch Southern District, dated September 20, 1990 (1 page).
- E. California Department of Transportation, District 11, memorandum from James T. Cheshire, Chief Environmental Planning Branch, dated September 19, 1990 (2 pages).
- F. California Department of Fish & Game, letter from Pete Bontadelli, Director, dated September 21, 1990 (5 pages).
- G. City of Chula Vista, memorandum from Clifford Swanson, City Engineer, dated September 27, 1990 (1 page).
- H. Chula Vista City Fire Marshal, memorandum from Carol Gove, dated August 27, 1990 (1 page).
- I. Sweetwater Union High School District, letter from Andrew B. Campbell, Administrator of Planning, dated May 31, 1990 (1 page).
- J. Sweetwater Union High School District, letter from Thomas Silva, Director of Planning, dated August 23, 1990 (3 pages).
- K. Chula Vista City School District, letter from Kate Shurson, Director of Planning, dated September 21, 1990 (2 pages).
- L. Chula Vista City School District, letter form Kate Shurson, Director of Planning, dated July 13, 1989 (2 pages).
- M. Chula Vista City School District, letter from John E. Linn, Assistant Superintendent for Business Management, dated September 11, 1989 (1 page).

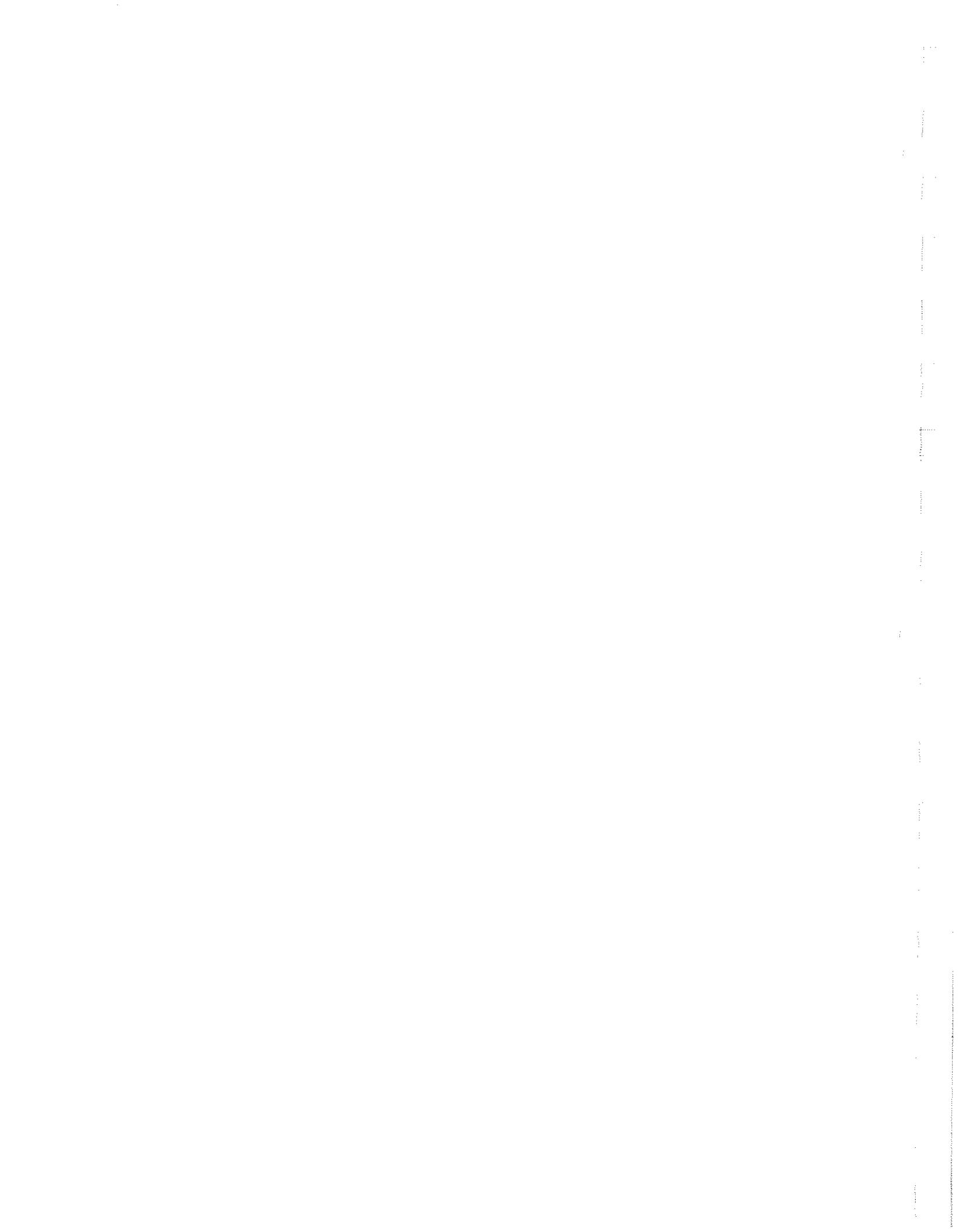


Table 3-1 (continued)

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- N. Save Our Bay, Inc., letter from William E. Claycomb, dated September 17, 1990 (6 pages).
 - O. Citizens Coordinate for Century 3, letter from Judith M. Collins, San Diego Bay Committee, dated September 26, 1990 (1 page).
 - P. Bay Users Group of San Diego, memorandum from Judith Collins, President, dated September 26, 1990 (1 page).
 - Q. Letter from Elizabeth Cooper dated September 24, 1990 (2 pages).
 - R. San Diego Chapter Sierra Club, letter from William J. Robens, Conservation Chair, South Bay Group, dated September 19, 1990 (6 pages).
 - S. San Diego Audubon Society, letter from Norma Sullivan, Conservation Chair, dated September 11, 1990 (1 page).
 - T. Environmental Health Coalition, letter from Laura Hunter, Clean Bay Campaign Coordinator, dated September 25, 1990 (6 pages).
 - U. Starboard Development Corporation, letter from Mr. Ian Gill, dated September 26, 1990 (5 pages).
 - V. Sierra Club Legal Defense Fund, Inc., letter from Laurens H. Silver, dated September 25, 1990 (2 pages).
 - W. Bayfront Conservancy Trust, letter from Dr. Stephen Neudecker, Executive Director, dated August 31, 1990 (18 pages).
 - X. Bayfront Conservancy Trust, letter from Dr. Stephen Neudecker, Executive Director, dated September 12, 1990 (17 pages).
 - Y. Bayfront Conservancy Trust, letter from Board of Directors, dated September 19, 1990 (4 pages).
 - Z. A. D. Hinshaw Associates, letter from Philip L. Hinshaw, dated September 26, 1990 (86 pages).
 - AA. Chula Vista Investors, letter from William J. Barkett, dated September 26, 1990 (8 pages).

Table 3-1 (continued)

- BB. Peterson & Price, letter from Paul A. Peterson and Matthew A. Peterson, dated September 26, 1990 (8 pages).
- CC. Planning Commission Public Hearing Verbatim Transcript of Peter Watry's Testimony on September 26, 1990, sent by Robin Putnam, City of Chula Vista, dated October 15, 1990 (4 pages).
- DD. Office of Planning and Research, letter from David C. Nunenkamp, Deputy Director, Permit Assistance, dated September 20, 1990 (1 page).

3.1.1 Type of CEQA Document - Plan Level versus Project Level EIR

Numerous comments were received from agencies and the public that questioned whether the impacts of the project could be determined at this time in light of the general type of information available on the project.

The Draft EIR for the LCP No. 8 Resubmittal is a plan-level CEQA document and is not a project-level compliance document. As stated in Volume II (pg. 1-1) this EIR addresses the resubmittal of the City of Chula Vista's certified Local Coastal Program (LCP); and, as such, analyzes the environmental consequences of approval and adoption of the proposed Resubmittal. This EIR also addresses changes to the other City plans that would need to be amended to correspond to the LCP - including the City's General Plan, Bayfront Specific Plan and Bayfront Redevelopment Plan.

Since the applicant has also submitted a development plan for the site, this EIR addresses this development plan as the "ultimate potential action" of the project. By addressing the "ultimate potential action" of the LCP resubmittal adoption, this EIR has evaluated the types and magnitudes of impacts that could be expected from construction and operation of the proposed development plan and alternatives.

The CEQA Guidelines distinguish between the degree of specificity necessary for program approvals versus construction projects in Section 15146 as follows:

- (a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.
- (b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.

It is important to recognize that this development plan (or any of the alternatives except the No Project Alternative) will require a project-level CEQA compliance prior to final project approval by the City of Chula Vista and issuance of permits. Project-specific details, including among others: grading plans, geotechnical studies, groundwater studies, testing and monitoring, engineering plans and the biological Habitat Restoration and Management Program will be required for subsequent CEQA review and approval at the project level.

3.1.2 Cumulative Impacts

Cumulative impacts "shall be discussed when they are significant" (CEQA Guidelines, Section 15130(a)). Cumulative impacts may be defined as environmental changes resulting from a single project (Midbayfront) or a number of separate projects. As defined in CEQA Guidelines, Section 15355(b):

The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

The August 1990 DEIR incorporated cumulative impact issues into the individual resource studies. For example, the biological assessment took into account the rapidly diminishing habitat for raptors within the region, as well as for other sensitive species. Similarly, the traffic analysis utilized regional SANDAG projections. A number of commentors noted, however, that cumulative impacts were not addressed. Consequently, an expanded Cumulative Impact discussion is provided in Volume II, Section 9.0, that specifically describes how cumulative effects were addressed in each resource analysis.

This cumulative impact discussion is organized in two parts: (1) the cumulative environmental effects of the Midbayfront Project alone (i.e., environmental consequences when all documented project impacts are considered collectively); and (2) environmental effects on a more regional scale, considering other bayfront projects in the South Bay area that may incrementally impact one or more environmental resources.

3.2 GENERAL RESPONSES REGARDING GEOTECHNICAL AND HYDROLOGICAL ISSUES

Geotechnical and hydrological comments received on the DEIR were largely related to the following general issues:

- Site Drainage Control, Detention Basins, and Oil/Grease/Sediment Traps
- Design and Maintenance of Proposed Lagoons
- Groundwater Pumping and Effect on Water Quality

These and a number of sub-issues raised during the public comment period are addressed in General Responses 3.2.1 through 3.2.3. The General Responses are based upon the information available during preparation of the August 1990 DEIR, as well as the additional data which have subsequently become available since the close of the public review period. These new data are summarized in Section 2.0 of Volume I, above, and are on file at the City of Chula Vista. The General Responses, consequently, summarize and describe the results of additional studies and engineering designs proposed by the applicant and further evaluate the degree to which these data reduce impacts previously discussed in the DEIR.

3.2.1 Site Drainage Control, Detention Basins, and Oil/Grease/Sediment Traps

Numerous comments were received from the agencies and the public regarding how and where the site would drain and how the drains would be designed and constructed to minimize impacts to the area's mudflats and eelgrass beds.

Although site surface drainage will be altered by proposed development, the velocity of flows to the bay will be no greater than current (undeveloped) conditions. Drainage water

will be controlled by a series of sediment traps upstream of outfalls, and a detention basin upstream of the "F" & "G" Street Marsh. Oil, grease, and litter carried by drainage water will be controlled by the sediment traps and a rigorous street sweeping program.

3.2.1.1 Site Drainage

Rick Engineering Company (REC) has performed several studies relating to various segments of site drainage and hydrology (Rick Engineering Company, 1989a, 1988b available at the City of Chula Vista). Of the total site area, approximately 35 acres will drain directly to San Diego Bay via one 24-inch pipe, and through twin 36-inch pipes. The remaining approximately 100 acres of the project will be directed into a detention (and desiltation) basin to be constructed at the current site of the seasonal fresh water marsh. This basin is fed by an 18-, a 36-, and a 60-inch pipe. Directly upstream of each of the five pipe outfalls a "Water Quality Control Structure" (Oil/Grease/Sediment Trap) is proposed. The purpose of the detention basin is two-fold:

1. To act as a desilting facility - primarily during and immediately following construction, until vegetation is established; and
2. To act as a detention basin to attenuate the rate of storm runoff discharging from the development to a level such that both the 10-year and 100-year design discharges will be at or below existing discharges.

From the basin, flows would be transported by pipe to the "F" & "G" Street salt water marsh to the south of the basin probably controlled by a weir or side/flap gate (refer to Figure 3.2-III, Possible Control Valve Designs, and Figure 3.2-IV, "F" & "G" Street Marsh). At the request of the USFWS, the applicant has committed to developing a monitoring and mitigation plan designed to mitigate the discharge of pesticides, fertilizers, and heavy metals into the "F" & "G" Street Marsh. Development of an appropriate monitoring plan is to be worked out with USFWS and City staff prior to submission of the project-level EIR.

The detention basin has been designed to use an "open" control valve during winter rainy periods to control flow of runoff through the "F" & "G" Street Marsh. Likewise, the control valve will be "closed" during dry summer periods in order to contain low-volume fresh water flows. However, no provision has been made for the possibility of intense summer tropical storms. These storms, although of short duration, can produce enormous quantities of rain and subsequently runoff. During the summer months, the control valves to the detention basin will be closed, and the basin may already contain some water from impounded dry-season runoff. A high intensity tropical storm could potentially fill the basin and crest the adjacent roadway, spilling over to the "F" & "G" Street Marsh. The applicant will address the potential for this type of flooding in the project level monitoring and mitigation plan. An emergency spillway from the basin to the "F" & "G" Street Marsh is a possible mitigation measure.

The figures following this page give additional graphic information on these features.

- Figure 3.2-I: Site Drainage - Figure 3.2-I is a schematic representation of site drainage considerations. The proposed project plan is to divide the site into two watershed areas. These two watershed areas will direct surface runoff water (rainfall, irrigation, etc.), via collection drains and a subsurface system of storm drain pipes, to two different locations.

The western portion of the site (approximately 35 acres) will direct drainage to two outlet points, as shown on Figure 3.2-I, which empty directly into San Diego Bay. These outfalls are fed by one 24-inch pipe and by twin 36-inch pipes to the south and north, respectively. The outfalls are planned with invert elevations +1 foot, MSL (approximately +4 feet, MLLW). They will be provided with riprap erosion protection aprons (refer to Figure 3.2-V) for protection of the adjacent mudflats.

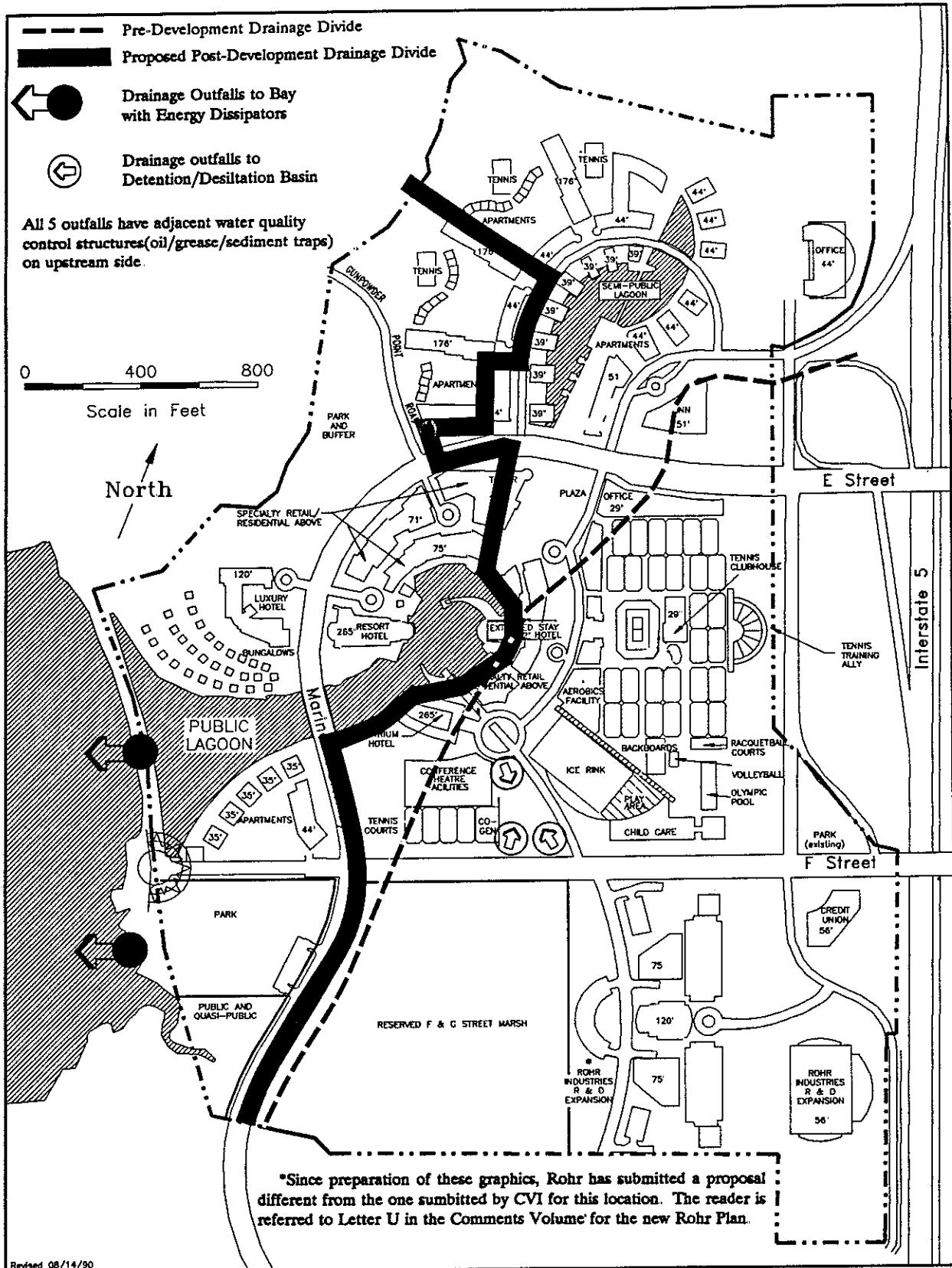
The eastern portion of the site will drain via a system of three pipes. These are planned as 18-, 36- and 60-inch-diameter pipes, and will direct water to the detention/desilting basin. The basin is designed to regulate flows through the "F" & "G" Street Marsh, with this drainage going ultimately to San Diego Bay.

All five of the outfalls discussed above will have oil/grease/ sediment traps installed just upstream of the outfall.

- Figure 3.2-II: Water Quality Control Structure - This preliminary plan shows a possible design for the proposed three-chambered oil/grease/sediment traps. This design is somewhat more robust than the more conventional two-chamber traps, and is anticipated by the designer (REC) to provide a higher level of protection. However, there are no documented performance data on the three-chamber design, and monitoring will be required for at least three years to evaluate their performance.
- Figure 3.2-III: Possible Control Valve Designs - Figure 3.2-III presents two possible designs for the manually-operated control valves proposed between the detention basin and the "F" & "G" Street Marsh. The weir type operates by opening "up-and-down," and the side/flap gate is generally designed to operate in a similar manner. Effectiveness of the two designs is similar.
- Figure 3.2-IV: Discharge Control Valve Locations - Discharge control valves are proposed to regulate flow from the detention/desilting basin to the "F" & "G" Street Marsh. The proposed locations of these discharge control valves are presented in Figure 3.2-IV. The first location (north of "F" Street) is at the exit point of the detention/desilting basin, with the second location (south of "F" Street) between the seasonal fresh water marsh and the "F" & "G" Street salt water marsh.
- Figure 3.2-V: Proposed Outlet Protection - Design Data - Current plans call for two of the storm drain outlets to exit to San Diego Bay at invert elevations of +1 foot, MSL (approximately +4 feet, MLLW). The outfalls would therefore be discharging onto the mudflats, with the potential for erosion and scour of the mudflats due to the effect of the outfall water. The proposed protective structure would utilize design

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PROPOSED DRAINAGE

Figure 3.2-I

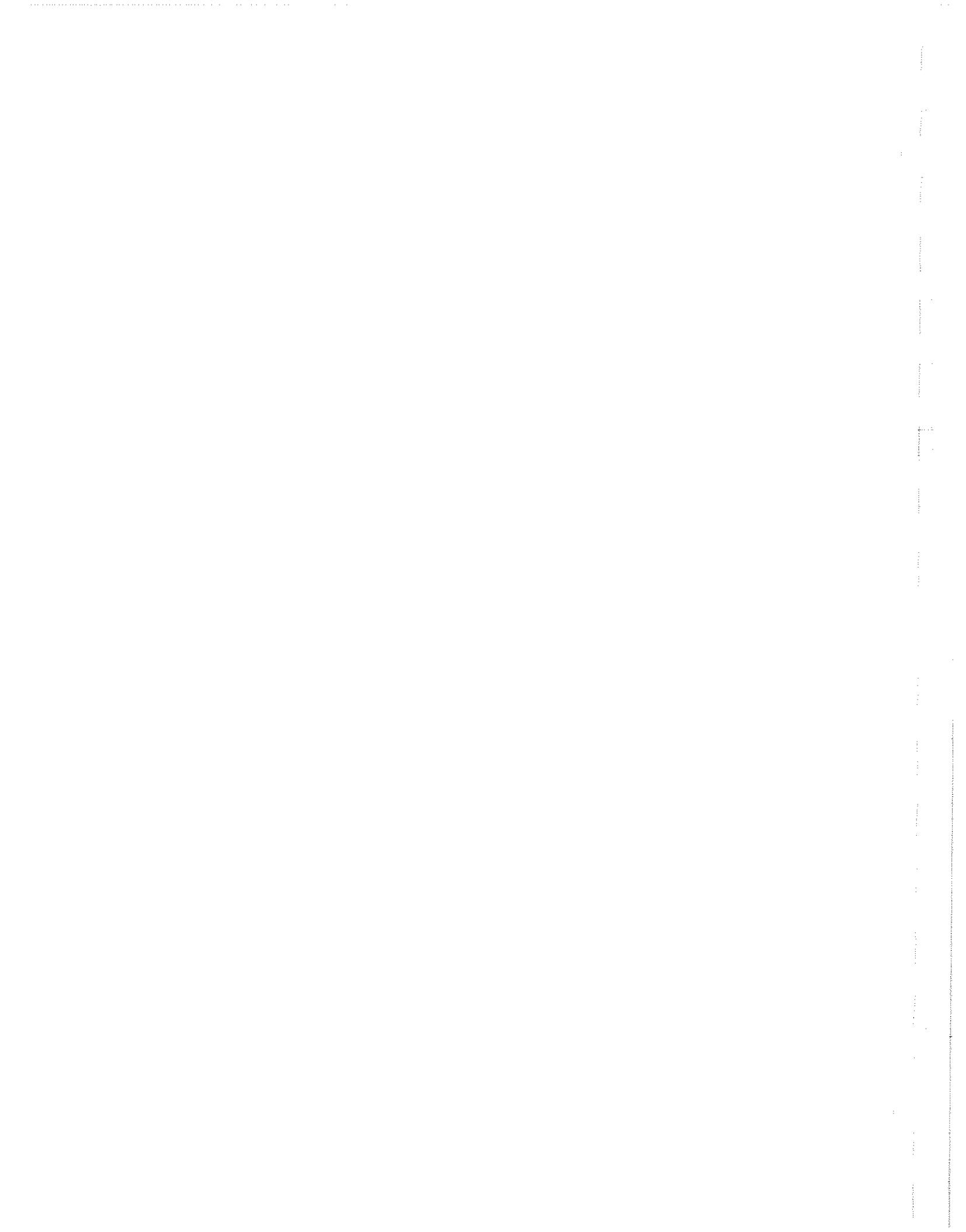


EXHIBIT NO. 1 (SAMPLE ONLY)

-TOP ELEVATION PER PLAN (SEE MANHOLE NOTES 142)

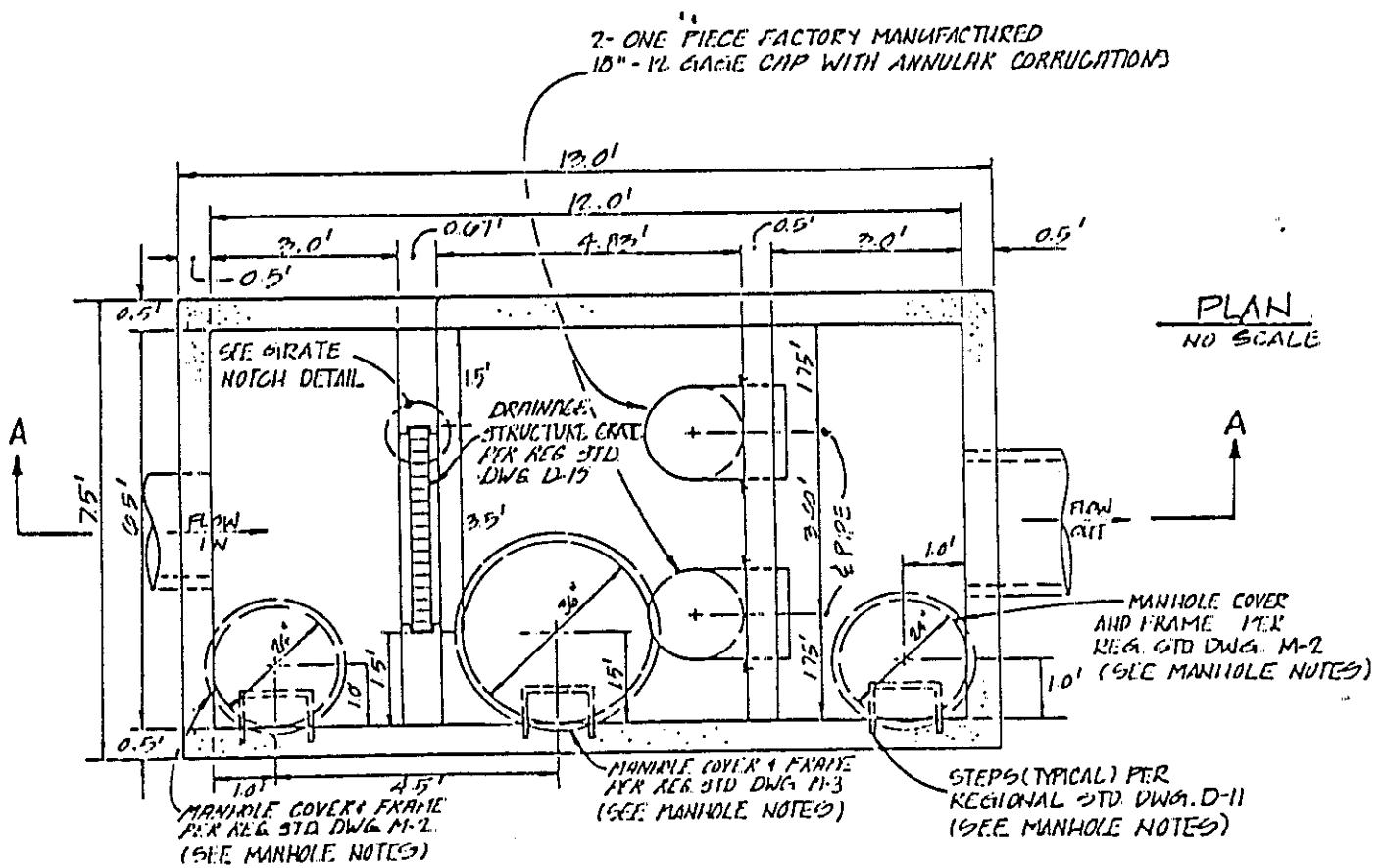
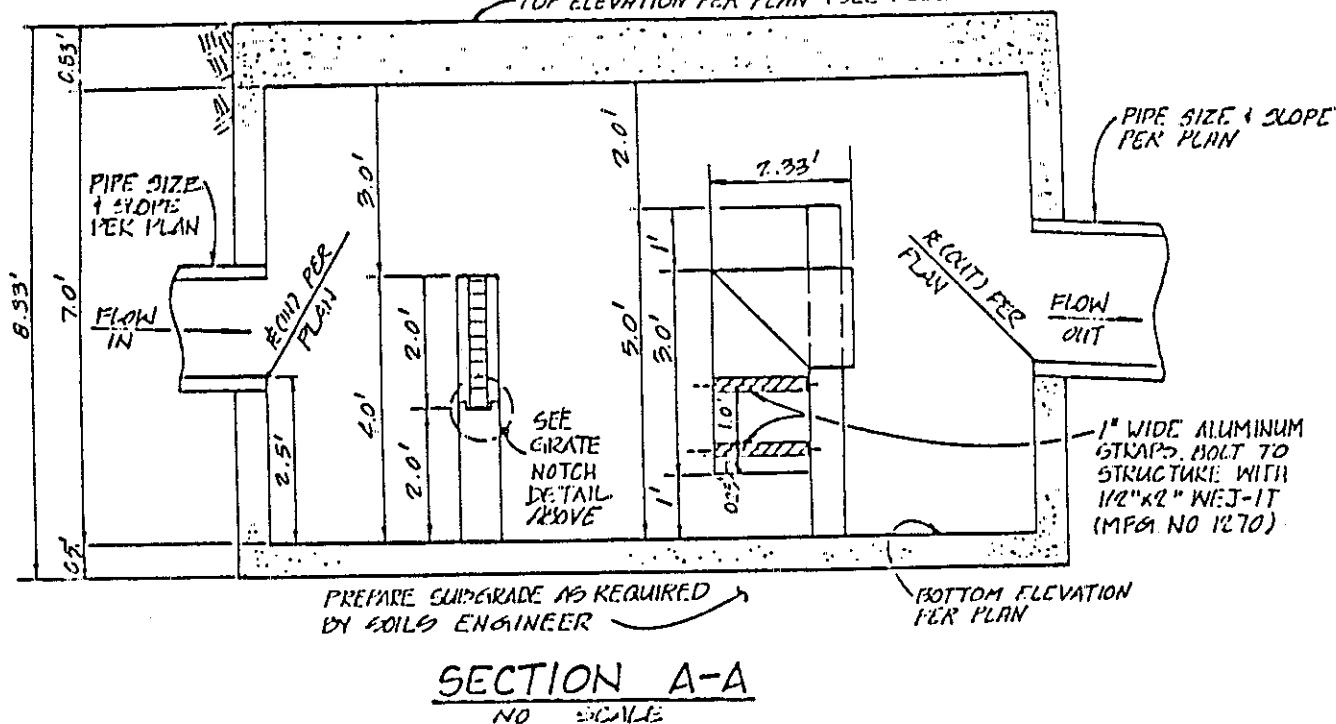
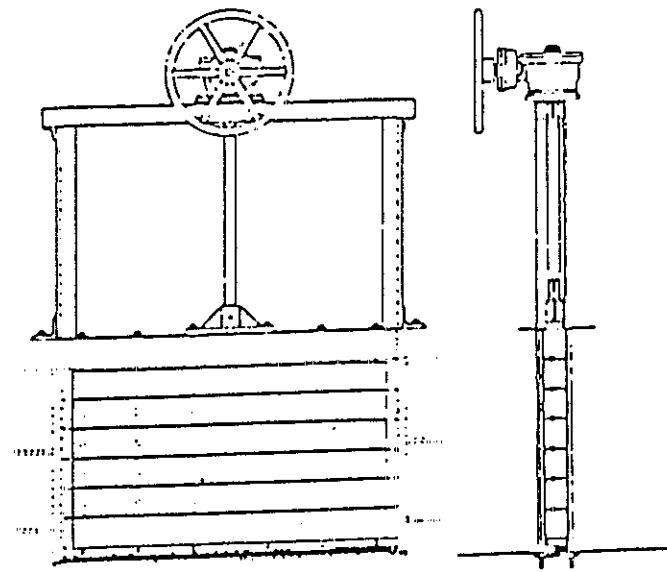


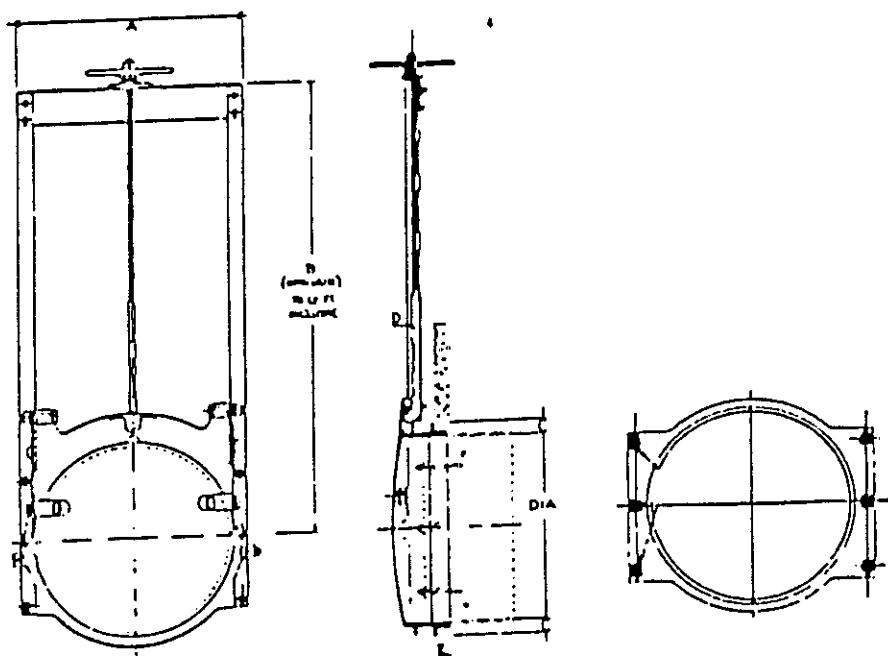
Figure 3.2-II

WATER QUALITY CONTROL STRUCTURE

Source: Rick Engineering Company, 1990 (Appendix I-E)



WEIR TYPE



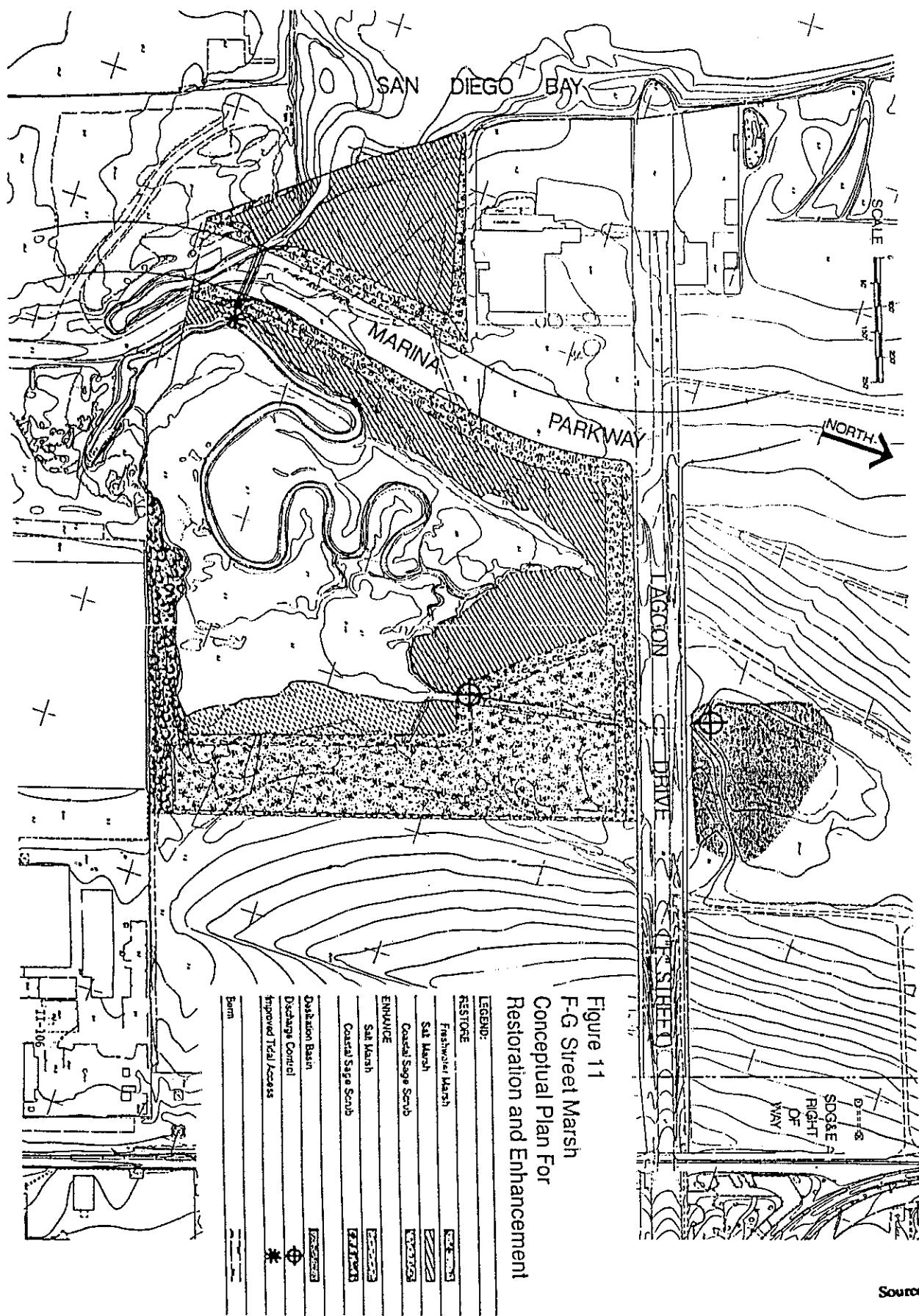
SIDE/ FLAP GATE

EXHIBIT NO.2 (SAMPLES ONLY)

Source: Rick Engineering
Company, 1990
(Appendix I-E)

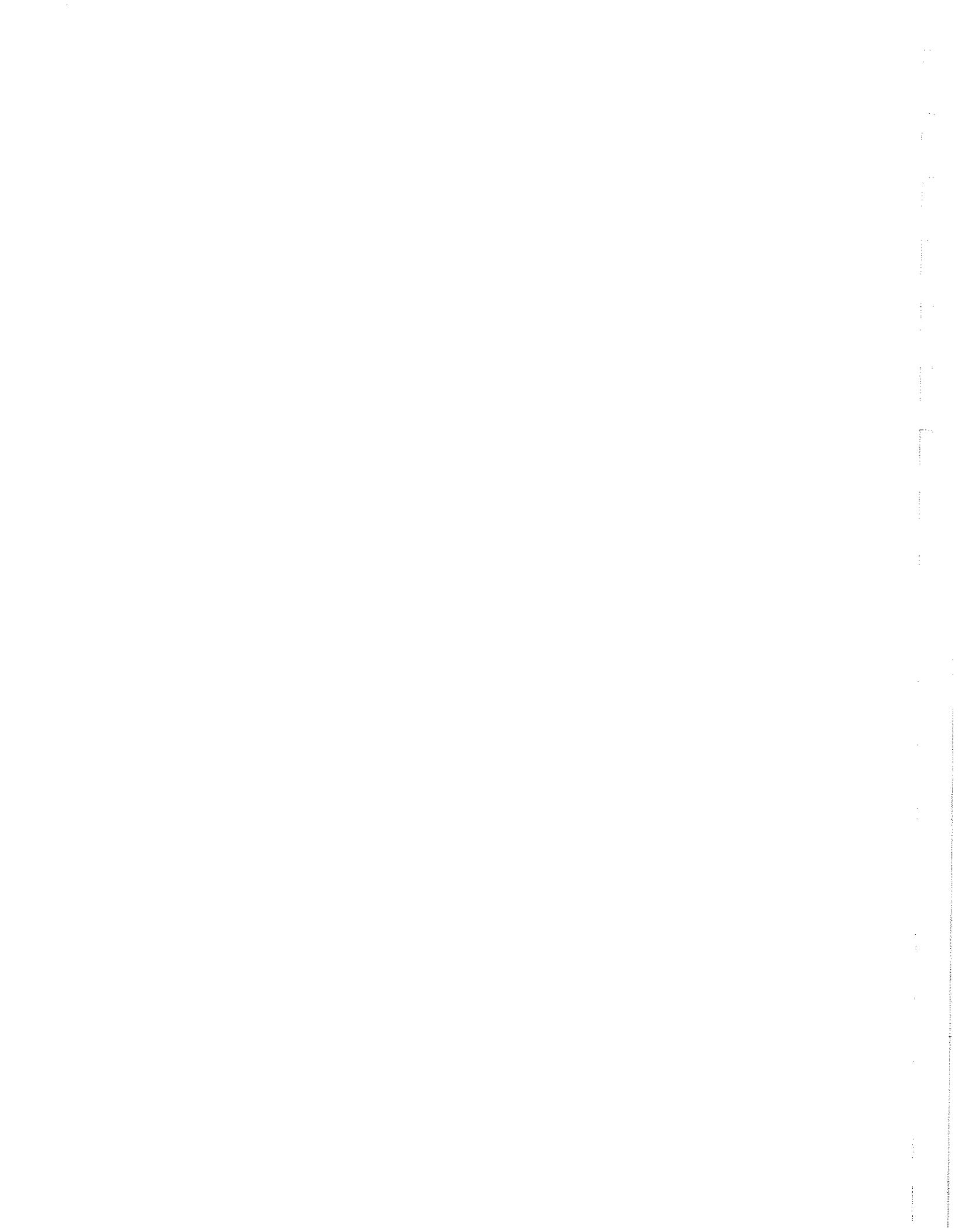
Figure 3.2-III

POSSIBLE CONTROL VALVE DESIGNS

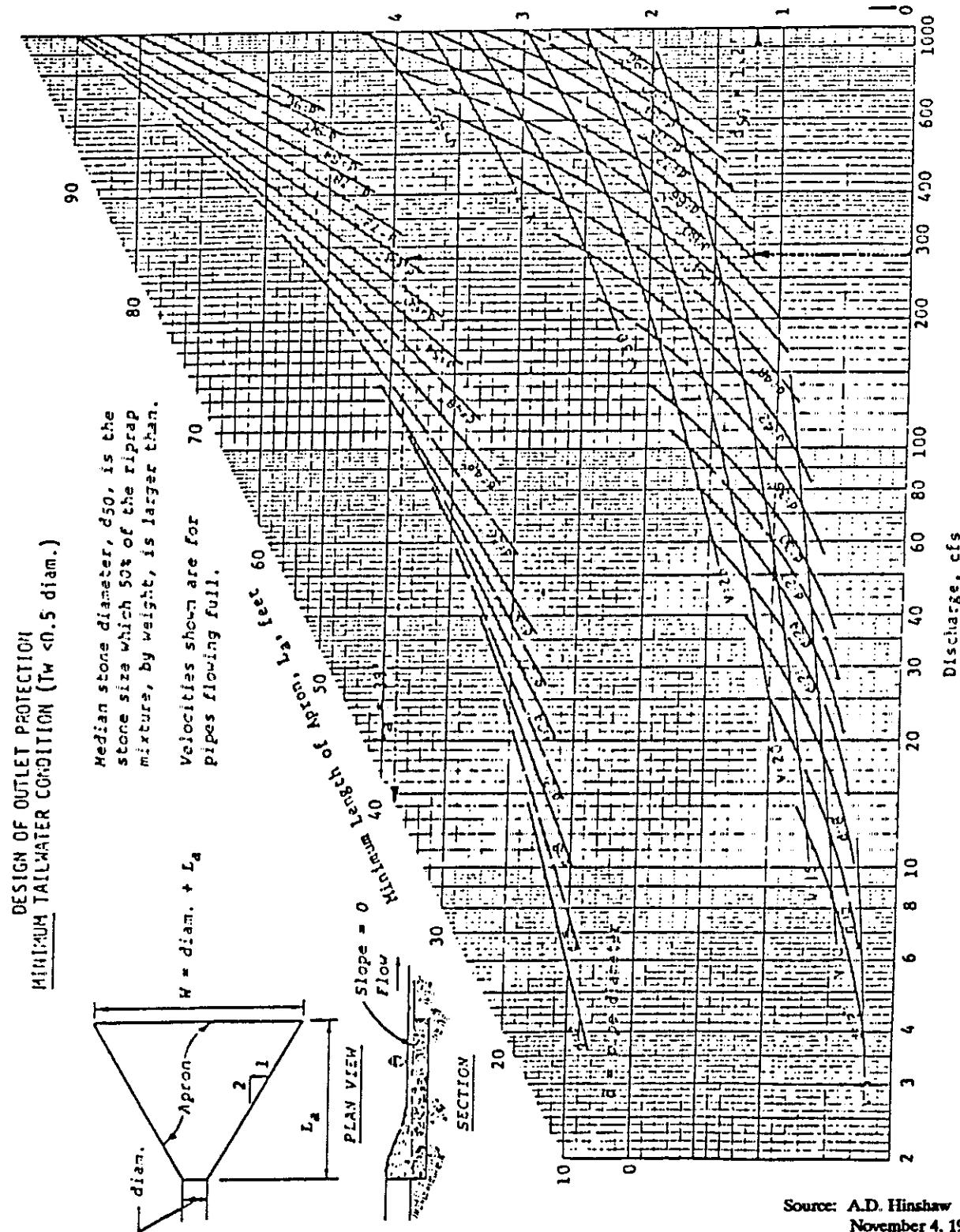


Source: Rick Engineering Company, 1990
 (Appendix I-E)

Figure 3.2-IV
DISCHARGE CONTROL VALVE LOCATIONS



July 1975

Median Stone Diameter, d_{50} , In Feet

Source: A.D. Hinshaw
November 4, 1990

Figure 3.2-V

PROPOSED OUTLET PROTECTION DESIGN DATA

criteria developed by the U.S. Department of Agriculture Soil Conservation Service. This generally accepted design is considered by the applicant to be adequate for protection of the mudflats from scour and erosion at the discharge outlets.

Desilting Facility

One of the major functions of the detention basin is to act as a desilting basin during the early phases of the project. For this reason, it will need to be adequately maintained during the course of mass grading and through the majority of site work. Once the project has been graded and landscaping established, silt generation will substantially diminish, requiring only general landscaping-related maintenance. The basin (after project completion) will then function primarily as a detention facility.

Post-Development Hydraulics

The proposed modifications to site drainage, as described in the two REC hydrology documents (Rick Engineering Company, 1989a, 1989b available at the City of Chula Vista) include increasing the watershed into the seasonal fresh water marsh from 46.7 acres to 96.3 acres, and converting the seasonal fresh water marsh into a detention basin designed to limit post-construction 10-year and 100-year design discharges to levels at or below existing discharges. By collecting the additional tributary watershed as described in the REC detention basin study (Rick Engineering Company, 1989b), approximately 50 acres of the development, which would have drained into San Diego Bay, has been redirected into the proposed detention basin adjacent to the "F" & "G" Street Marsh. This will attenuate flood peaks and help control the flow of sediment and chemical pollutants into both the "F" & "G" Street Marsh and San Diego Bay as storm runoff will leave the detention basin at a slower, controlled rate.

The U.S. Army Corps of Engineers HEC-1 computer program was used by REC (Rick Engineering Company, 1989b) to analyze the project. An existing (pre-development) condition HEC-1 was performed and a final (post-development) condition run was made for each design storm.

The HEC-1 Flood Hydrograph Package program has the ability to generate hydrographs and route them through natural, as well as improved, river channels. It also has the ability to model the effects of placing detention basins in the watershed model. In the design of a detention basin, the program takes into account the storage volume of the basin and discharge characteristics of the outlet works. The following table shows the preliminary detention basin design information. These data show post-development flow into the detention basin, and the associated attenuated discharge (19 cfs).

Detention Basin Design Information

| 100-year Developed Discharge (cfs) | 10-year Developed Discharge (cfs) | Design Storage Volume (acre-feet) | Developed Area (acres) | Release Rate at Design Stage 100-Year Event (cfs) |
|------------------------------------|-----------------------------------|-----------------------------------|------------------------|---|
| 160 | 58 | 9.4 | 96 | 19 |

Source: Rick Engineering Company, 1990 (Available at City of Chula Vista)

As calculated in the REC existing condition HEC-1 analysis for the project, the 10-year pre-development peak discharge is 8 cfs, and the 100-year pre-development peak discharge is 41 cfs, at the downstream property boundary. The detention basin and associated outlet structure were then sized such that the peak discharges from the site in the final (developed) condition are also 8 and 41 cfs for the 10-year and 100-year design storms, respectively. These discharge quantities are generated at the culvert which drains the "F" & "G" Street Marsh to San Diego Bay. It is noted that peak discharge from the detention basin to the "F" & "G" Street Marsh is 19 cfs, and that the 41 cfs and 8 cfs (100-year and 10-year event, respectively) discharges occur at the exit of the "F" & "G" Street Marsh to San Diego Bay. The HEC-1 analysis shows that the peak discharges are attenuated equal to the pre-development condition and, thus, satisfies the requirement that the 10-year and 100-year peak discharges from the project site are not increased.

Comparison of Discharge at Design Point

| Design Storm (year) | Existing Discharge (cfs) | Developed Discharge with Detention (cfs) |
|---------------------|--------------------------|--|
| 10 | 8 | 8 |
| 100 | 41 | 41 |

Source: Rick Engineering Company, 1990 (Available at the City of Chula Vista)

Design criteria for the detention basin were based on the requirement that the peak discharges from the site for the (1) 10-year, 6-hour and the (2) 100-year, 6-hour storms be no greater after site development than the discharges prior to site development. The basin has been designed to accommodate a capacity of 9.4 acre-feet.

3.2.1.2 Water Quality Control Structures

Oil/Grease/Sediment Traps

REC has recommended the use of relatively innovative three-chambered oil/grease/sediment traps which are intended to intercept pollutants before they enter either San Diego Bay or the detention basin. These traps are to be installed just upstream of the two outfall locations into San Diego Bay and the three outfall locations into the detention basin (see Figure 3.2-I).

The effectiveness of these basins is directly related to proper maintenance (cleaning). When traps are cleaned prior to the rainy season, the possibility of flushing the collected contaminants through the structure is minimized. Cleaning will be performed at least twice a year (March and October).

The operational effectiveness of these three-chambered traps has not yet been confirmed. It is noted that at the present time, the generally accepted standard design for sediment, oil, and grease traps consists of a two-chamber unit. The applicant has committed to the larger three-chamber traps (which presumably provide a higher level of protection than the standard two-chamber traps) at the request of the USFWS.

No performance data are currently available on the operational effectiveness of this design. REC anticipates that monitoring data will demonstrate that the operational effectiveness of this design is superior to the current, standard two-chamber unit.

Monitoring of these units for operational effectiveness will be performed for at least three years. The applicant will commit to appropriate mitigation measures in the project-level EIR, in the event that future monitoring shows these traps to be inadequate in retaining oil/grease/sediment and other pollutants.

A rigorous street sweeping program performed monthly will include both streets and parking lots. This will help remove silts and other particulate matter which pick up or absorb oil, grease, and other contaminants.

3.2.2 Design and Maintenance of Proposed Lagoons

A number of commentors questioned the size and depth of the lagoons, as well as the replacement water, and maintenance of water quality in the lagoons.

The two lagoons proposed for the site are intended as closed, recirculating systems. The smaller lagoon is to have a depth of 6 feet and a volume of 10 acre-feet. The larger lagoon is to have a depth of 8 feet and a volume of 46 acre-feet. Although a bay source had been considered, current plans call for using groundwater as the source for replacement water.

3.2.2.1 Proposed Lagoons

As shown on the proposed development plan, there are two lakes (interchangeably called lagoons) proposed for the development. These features include the approximately 10-acre central lagoon abutting (but separate from) San Diego Bay, and the approximately 2.5-acre semi-public residential lagoon. Both systems are intended to be re-circulated, essentially closed, systems. The proposed lakes feature an erosion-resistant edge and a shoreline configuration designed to promote safe and nuisance-free conditions. The maximum water depth at the lake edge is 1-foot, gradually deepening on a gentle bottom slope (5 units horizontal to 1 unit vertical) to a maximum lake depth of 6 feet for the semi-public residential lagoon, and 8 feet for the central lagoon. The estimated water volume for the central lagoon (with an 8-foot maximum depth) is approximately 46 acre-feet. The estimated water volume for the semi-public residential lagoon (with a 6-foot maximum

depth) is approximately 10 acre-feet. Annual evaporation losses for the lakes are estimated at 4 feet, which translates to approximately 46.2 acre-feet. Combined losses from evaporation and seepage are estimated at approximately 80 acre-feet. Losses from evaporation and seepage are expected to be approximately equal.

3.2.2.2 Lagoon Liners

In order to limit water loss by seepage from the lagoon bottom, some sort of lagoon lining system is required. Current plans indicate that the lagoons will be lined with a compacted clay soil layer at least 1-foot thick. This clay layer is to be covered with a 6-inch layer of soil cement.

3.2.2.3 Lagoon Replacement Water

Initial development plans considered the possibility of either a salt water intake located in San Diego Bay (as a straightforward source of replacement water for the lagoons), or withdrawal of groundwater. Considerable agency opposition to a seawater intake resulted in the decision to use groundwater as the primary water source for filling and maintaining the lagoons. Subsequent responses discuss groundwater feasibility, quantity, and quality. Preliminary groundwater investigation indicates the feasibility of using the groundwater supply. Should subsequent investigation or conditions render this source undesirable, the bay source could be investigated further.

3.2.2.4 Maintenance of Water Quality in the Lagoons

Salinity and nutrient build-up due to evaporation losses may occur over time. J. Harlan Glenn maintains (pers. comm., December 13, 1990) that salinity increases are typically much less than would be expected, possibly due to seepage losses or exchange during seepage. In the event that salinity levels become unacceptable, this condition can be treated either in-place (e.g., by reverse osmosis treatment), or by removal (possibly to an off-site disposal facility) of portions of the lagoon water (J. Harlan Glenn, pers. comm., December 13, 1990). Nutrient trapping and stripping will be a part of the lagoon management plan.

3.2.3 Groundwater Pumping and Effect on Water Quality

Issues raised by the public related to groundwater pumping for the lagoons were substantial in number. Specifically, concerns raised included the feasibility of groundwater pumping for the lagoons, impacts on water quality from off-site sources due to groundwater withdrawals, dewatering effects, and the impacts of the project on hydrologic regime changes, particularly the potential for salt water intrusion and effects on the salt water marshes.

GEOCON Environmental Consultants (GEC), has performed well hydraulic testing and water chemistry testing at the site. Their hydraulic testing indicates the feasibility of using a well field of five to eight wells to provide replacement water for the proposed lagoons. Water quality testing at the site did not reveal any contaminants. However, the adjacent properties are known to have groundwater impacted by contaminants (VOCs). Although not considered likely, the possibility exists of migration of contaminants to the Midbayfront

project site. If VOCs are encountered at levels requiring mitigation as a result of groundwater pumping, then the VOC contamination problems can be mitigated by existing feasible methods.

Salt water intrusion due to proposed pumping is anticipated, primarily in the vicinity of the well field. In addition, lowering of groundwater levels may have an impact on the "F" & "G" Street Marsh. These impacts include plant stress and/or consolidation of the marsh sediments.

Geotechnical investigations for various purposes are known to have been performed on and adjacent to the bayfront site as early as 1976, when Southern California Testing Laboratory submitted their "Geotechnical Investigation: Bayfront Public Improvement Report" to the City of Chula Vista Redevelopment Agency. GEC Incorporated performed several geotechnical investigations at the bayfront site, starting in 1984. Woodward-Clyde Consultants (WCC) summarized their investigative work, including investigation of VOC impacts to groundwater on adjacent properties in reports released in 1988 and a report of geotechnical investigation in 1990. Also in 1990, groundwater conditions at the Midbayfront site were addressed in reports prepared by GEC which are available for public review at the City of Chula Vista.

Work by GEC includes installation of two pumping wells and of two monitoring wells, testing of well hydraulics, and sampling and chemical testing of water obtained from the wells. Their work generally supports the feasibility of using groundwater for filling and maintenance of the proposed lagoons.

3.2.3.1 Feasibility of Groundwater Supply for the Proposed Lagoon

Water Requirements of Lagoons

Water production of an aquifer is primarily a function of the thickness and the hydraulic conductivity (permeability) of the aquifer. Hydraulic testing of the existing wells indicates that wells capable of producing a supply of 10 to 15 gallons per minute (gpm) can be installed at the site. The estimated production rates of 10 to 15 gpm reflect the limited (20- to 30-feet) saturated thickness of the aquifer. J. Harlan Glenn and Associates (JHG) have estimated that 82 gpm would be needed for lagoon maintenance under peak (summer) conditions (available for public review at the City of Chula Vista). The yearly average flow rate requirement is estimated at 50 gpm. A well field comprised of five to eight wells is therefore considered adequate to provide water for the lagoons.

Anticipated Well Siting

It is anticipated that the majority of the wells would be sited along San Diego Bay in order to take advantage of natural recharge from the bay. GEC calculations of water level declines suggest that the aquifer can support four wells spaced 200 feet apart and located 75 feet inland of San Diego Bay, and a fifth (currently existing) well located 350 feet inland. These calculations are based on an average pumping rate of 10 gpm per well, and

drawdowns (water level declines) in the wells being limited to 15 to 20 feet (Limited Groundwater Supply Report available for public review at the City of Chula Vista).

Water Quality

Analysis of groundwater samples obtained from the wells installed at the site indicate that the water is non-potable and brackish. The analysis did not indicate the presence of petroleum hydrocarbons, VOCs, or organochlorine pesticides above laboratory detection limits (GEC, Limited Groundwater Supply Report available for public review at the City of Chula Vista.) VOCs are light petroleum compounds, and include benzene, toluene, xylene, and ethylbenzene. Gasoline spills are a common cause of introducing these compounds to an aquifer, although they can be introduced by a variety of other sources. Impacts from VOCs have been documented off site, on adjacent properties. Although impacts similar to those documented on adjacent properties have not been observed to date at the Midbayfront site, the potential exists for groundwater impacts from VOCs to be present within the aquifer of the project site.

In general, the work performed to date by GEC supports the feasibility of the use of groundwater for the proposed lagoon's water supply. The extent and source history of the VOCs on adjacent properties is unknown. Therefore, the potential for impacts to the well field from migration of VOCs, and other potential sources of impacts, is uncertain.

Water Treatment and Monitoring

The presence of VOCs (if encountered) in the groundwater used for the proposed lagoons may require treatment of the water prior to use. In general, the treatment of water to remove VOCs is not an uncommon procedure. VOCs can be removed from water by air stripping or activated carbon filter treatment, and can be incorporated into the water treatment system to be designed. Given the concentrations detected nearby to the proposed well field, the groundwater impacts due to VOCs can be mitigated by water treatment, if necessary.

Well water will be monitored on a regular basis for the presence of organochlorine pesticides (EPA 8080) and VOCs (EPA 8240).

3.2.3.2 Recharge/Leakage from the Proposed Lagoons

JHG has estimated the total leakage of the lagoons to be approximately 25 gpm. The effect of the recharge/leakage out of the lagoon will be to effectively reduce the overall groundwater level decline expected to occur as a result of groundwater pumping. It is noted that preliminary well field designs do not include the effects of the lagoon recharge and, thus, probably overestimate the effect of groundwater withdrawal. Final site design will include consideration for siting of the water wells between the lagoons and San Diego Bay in order to maximize the capture of the leakage/recharge from the proposed lagoons. Benefits of this capture include the reduction in water level declines (thus increasing well efficiencies), and the limiting of the areal extent of salt water intrusion by the hydraulic barrier established from the accumulation of water beneath the proposed lagoons.

3.2.3.3 Projected Water Level Decline

Preliminary calculations have been performed by GEC to estimate the water level decline (drawdown) produced by five wells withdrawing water at a constant production rate of 10 gpm. JHG estimates a continuous cumulative production of 50 gpm is the yearly average required (JHG Report, available for public review at the City of Chula Vista.) Water levels near and within the well field are anticipated to lower by 15 to 25 feet in the vicinity of the wells after one year of operation. Outside of the well field (approximately 200 to 400 feet), water levels are likely to decline from zero (0) to 15 feet. Recharge water (leakage) from the proposed lagoon and recharge from San Diego Bay will reduce the estimated water level declines (GEC Limited Groundwater Supply Report).

3.2.3.4 Salt Water Intrusion

Water chemistry data obtained by GEC indicate that the groundwater at the site is mildly brackish and possesses an average total dissolved solids (TDS) level of approximately 3,000 mg/l. The TDS of seawater is approximately ten times higher. Salinity increases are anticipated in the water obtained from the well field after pumping is established. Locally, salt water has been produced from groundwater sources. An abandoned salt water well is located adjacent to the GEC wells installed at the site. This well was historically used to supply salt water for the reconditioning of water softener agents.

The areal extent of the anticipated salt water intrusion into the existing brackish aquifer waters is likely to occur primarily in the vicinity of the well field. Predictions of the rate of salinity change cannot be provided without additional data (GEC, November 9, 1990). The positioning of the line of wells along the San Diego Bay would be designed to attempt to limit the inland extent of salinity increases. Additional investigative work will be needed to optimize this final design and to determine the effects of the project with respect to salt water intrusion.

3.2.3.5 Effect Upon the Hydrologic Regime of the Salt Water Marsh

Recharge from the proposed lagoon will help reduce the potential for impacts to the marsh habitats. The effect of the pumping will be to slightly increase the flow of groundwater through the marsh sediments during tidal exchanges. The actual change in sediment through-flow rates is anticipated to be low due to the large area from which the groundwater will be withdrawn by the well field. It is assumed here that the salt water marsh gains water from San Diego Bay during tidal exchanges (GEC, October 26, 1990).

There are, however, currently insufficient data to adequately define the actual effect of groundwater pumping on the salt water marsh. Impacts may include plant stress and/or consolidation of the compressible, saturated marsh sediments due to lowering of the water table.

As discussed previously, approximately 50 percent of the water used for maintenance of the water level in the lagoon is estimated as lost due to leakage through the bottom of the

lagoon. Thus, approximately 25 gpm of the projected 50 gpm total water need (pumped from wells) is lost to leakage, and returns to the groundwater system as recharge water.

The remaining 25 gpm of the total water (50 gpm) required for lagoon maintenance is consumed by evaporation. This water is essentially "lost" to the system. Thus, a net yearly average of approximately 25 gpm will be drawn out of the aquifer to supply the lagoon.

In response to groundwater pumping and the resulting lowering of the water table adjacent to the pumping wells, groundwater will be drawn through the marsh sediments. This water will likely be replaced (the aquifer recharged) predominantly by surface water from tidal exchanges. The water for the wells is estimated as being drawn from an area of 5 to 20 acres around the wells. The preliminary drawdown calculations do not address the vertical flow in the groundwater system (GEC, October 26, 1990).

Further investigation at the project level will be required to adequately resolve the possible impacts on the "F" & "G" Street Marsh of groundwater pumping.

3.2.3.6 Water Quality Impacts

The Midbayfront site is located in a groundwater resource area designated by the California Water Quality Board (RWQCB) for non-beneficial use and is not considered to be a potential drinking water aquifer. The existing water quality is rated as poor, relative to drinking water standards, and the water is non-potable and mildly brackish.

The site is located in proximity to a number of industrial and commercial centers. Water quality impacts have been noted in water samples obtained at adjacent properties located approximately 1,500 feet east-southeast of the proposed well field area. The concentrations of VOCs detected in the samples are on the order of tens of parts per billion (ppb), but are nevertheless present at levels that exceed current drinking water standards (e.g., set at 5 ppb for trichloroethene). Marine water quality standards have not been addressed, as there is no evidence that VOCs are being, or plan to be, discharged into San Diego Bay. In summary, the water pumped from wells to replenish the lagoon water supply is not expected to be contaminated by VOCs. Mitigation measures are, however, included which describe the procedure to be implemented for monitoring the water quality from the wells.

History of Off-Site Impacts

The source history and extent of groundwater and soil impacts have not been established for the adjacent properties. In addition, other potential sources in proximity to the site have not been investigated.

Potential for Contamination at Midbayfront

Water sampling and testing has been performed for the wells installed at the Midbayfront site. The chemicals detected at the adjacent properties, including trichloroethene (TCE), petroleum hydrocarbons and organochlorine pesticides, were not observed to occur in the groundwater samples collected at the Midbayfront site at levels above laboratory detection

limits. However, the potential exists for the migration of impacted groundwater into the southeast portion of the CVI site in the area adjacent to the impacted properties.

3.2.3.7 Existing Impacts from VOCs Detected in Water Wells Within the Adjacent Properties

The concentrations of VOCs measured in the groundwater samples obtained at the adjacent properties ranged from two to ten times the State of California Action Level of 5 micrograms per liter ($\mu\text{g/l}$ - equivalent to parts per billion) for drinking water (WCC, April 1988). The adjacent properties are located within a non-beneficial groundwater use area containing a non-potable aquifer. VOC impacts have not been detected at the Midbayfront site, based upon results of water sampling conducted to date by GEC. The potential exists that VOCs may be transported via groundwater towards the proposed well field. The well water may be monitored by periodic sampling and testing of water obtained from the well field or from sampling wells installed between the well field and adjacent properties. VOCs can be removed from water by air-stripping or activated carbon filter treatment, if necessary, and it is likely that the treatment can be incorporated into the water treatment system to be designed for the lagoon. Thus, any potential impacts from VOCs in the groundwater at the Midbayfront site can be mitigated by conventional means, if necessary.

3.2.3.8 Impact of Projected Change in Hydraulic Gradients on the Movement of VOCs

Movement of a chemical dissolved in groundwater is influenced by the flow of water through the aquifer. The chemical may also degrade, chemically bind to aquifer materials, and/or be dispersed or diluted as the chemical spreads through the aquifer over time. The flow of water is primarily due to the force (pressure) exerted on the water as indicated by the observed hydraulic gradient. The horizontal gradient is measured by the relative difference in water levels observed within the aquifer across the site. The estimated horizontal hydraulic gradient at the site ranges from approximately 0.001 ft/ft to 0.0003 ft/ft. This corresponds to a change in water level from inland to the bay of approximately 1.5 to 0.5 feet over a distance of 1,500 feet. Due to the limited thickness (20 to 30 feet) of the aquifer, water level declines in the wells are limited to a maximum of approximately 30 feet. Hence, for 30 feet of drawdown, the horizontal linear gradient attainable across the site (under the most severe pumping conditions) is 30/1500, or 0.02 ft/ft.

The potential exists that the pumping of the well field may enhance the movement of VOCs or other dissolved chemical constituents. However, effects of degradation, chemical/physical interactions with aquifer materials, and dispersion tend to limit the movement of dissolved chemical constituents. The current extent and source area and history of the VOCs (or other hazardous materials potentially in solution in the groundwater) has not yet been defined at the Midbayfront site.

3.2.3.9 Impacts from Pesticides in the Groundwater

Laboratory results from testing of a groundwater sample obtained by GEC from one of their production wells for organochlorine pesticides (EPA Method 8080) did not indicate the presence of the tested pesticides at concentrations above laboratory detection limits.

3.2.3.10 Potential Water Quality Impacts from Leakage out of the Proposed Lagoon

Lagoon leakage is estimated by JHG to be on the order of 25 gpm. Leakage from the proposed lagoons will be entering a non-potable aquifer system. The water within the lagoons is to be managed by water treatment facilities. The water that leaks out of the lagoons will be representative of the water found in the lagoons. Salinity increases are expected in the vicinity of the proposed lagoons. The effective influence of lagoon leakage (the horizontal extent of the groundwater "mound") is likely to be limited by the relatively low hydraulic conductivity soils expected at the site. The well field will also capture water from beneath the lagoon and restrict the circulation of the recharged lagoon waters within the aquifer.

3.2.3.11 Construction Dewatering

Temporary dewatering is likely to be required during various phases of construction, and can be properly permitted under existing regulations. The proposed lagoons may also be available to accept water derived from construction dewatering activities. Water chemistry monitoring will be required to obtain information concerning the presence of potential local groundwater quality impacts. If VOC impacted waters are encountered during the dewatering process, the treatment of the impacted water can be achieved by temporary water treatment processes such as activated carbon filtration.

3.3 GENERAL RESPONSES REGARDING BIOLOGICAL ISSUES

A number of comments were received which call for additional clarification on particular points of the biological investigations or analyses. These issues have been classified, as follows, for purposes of preparing general responses:

- Avian Collisions and Disruption of Flight Patterns
- Biological Effects of Lighting
- Raptor Perching and Predator Pressures
- Losses of Raptor Foraging Habitat
- Impacts to Vector Control Requirements
- Ratios of Habitat-based Mitigation Recommendations
- Isolation of the "F" & "G" Street Marsh
- Biological Issues Associated with Site Hydrology

General Responses 3.3.1 through 3.3.8 address these issues in light of the public comments received on the August 1990 DEIR. These responses also incorporate, where appropriate, the new information provided by the applicant since the publication of the DEIR. New data relevant to biological issues include the applicant proposed "design requirements" and "performance requirements," as well as related geotechnical studies and engineering designs for the detention and desiltation basin. These new data are summarized in Section 2.0 and are contained wholly in the current DEIR appendices.

3.3.1 Avian Collisions and Disruption of Flight Patterns

Three commentors raised concerns over the analysis and results of the investigations into potential disruption of flight patterns and avian collisions with structures proposed for the bayfront. Additional clarification of figures and species specific results as they relate to the endangered Brown Pelican were also requested.

3.3.1.1 Flight Study Methods and Results

The avian flight studies conducted at the Chula Vista bayfront sought to identify the patterns of flight activity of sensitive waterbirds in and around the proposed Midbayfront development area. The objectives of this study can be broken down to the following five issues:

1. To document avian flight patterns and intensity of flight activities within the Midbayfront area,
2. To determine the extent to which flight patterns and activities occur within the proposed development envelope,
3. To evaluate the potential for Midbayfront development to impact existing flight patterns,
4. To evaluate the likely result of any impacts and make a determination as to the significance of any anticipated impacts, and
5. To recommend mitigation or project modification as dictated by the study findings.

In more general terms, the goals of this study were to identify the level of bird flight interruption which might occur as a result of building intrusion into various flight patterns and to evaluate the effects of these interruptions with respect to potential bird collisions and loss of habitat utilization.

The first goal of the study was achieved by monitoring bird flights from one half hour before sunrise to just past sunset, on one day per week over a 7 month period (October 1989 through April 1990). On each observation day, flight activities, patterns and elevations for various species and groups were documented through the establishment and use of a three dimensional grid system over the entire Midbayfront area. The grid allowed observers to accurately record flight corridors on both a horizontal and vertical plane within the Midbayfront. For each observed flight, the time, bird species, elevations and path (i.e., the grid cells through which the flight passed) were recorded. Though more than one field season would have been optimal, we believe the data reflect general flight patterns accurately. The exception is in the case of the brackish marsh along "F" Street, where the ongoing drought has decreased water levels and the utilization of that habitat by shorebirds and waterfowl (see Representative Nature of the Field Data; Section II of Appendix C). Though flights to and from the brackish marsh were recorded, the intensity with which the

flight corridors to and from that habitat were used during the study period was probably lower than would have occurred under normal conditions.

By overlaying the flight data on the project plan and alternative designs it was possible to calculate an expected incidence of co-occurrence of buildings and birds within any given 3.7 acre square at various elevation ranges (referred to as a "cell" in these discussions). In making these calculations, the most conservative approach was taken to identifying these conflicting areas (i.e., when any portion of a grid and elevation range would be occupied by a building, the entire cell was considered to be impacted by the building). This approach was necessary since a calculation of impacts on the basis of proportion of grid or elevation range occupancy may have underestimated true co-occurrence since flight activities were not randomly distributed within any given cell. This conservative approach, therefore, often resulted in a substantial over-estimation of the true incidences of potential co-occurrence. Furthermore, this approach determined the theoretical number of collisions that would occur without considering the physical senses or navigational abilities of the birds i.e., it was assumed that every bird flying on a collision course with a building would stay on course and collide with the building. Even under these extremely conservative assumptions, however, impacts to all waterbird flights, when evaluated relative to the total flight activities within the study area, rarely exceeded a 5 percent threshold level.

To factor more realistic features into the analysis of bird flight behavior, an extensive literature review was undertaken to determine how birds truly acted around various structures. The literature review examined all relevant data, however, waterbird and raptor activities were specifically targeted. From studies which empirically examined avian collision rates with existing structures, it was determined that in a worst-case situation where buildings of the proposed development were assumed to have the same collision potential as transmission lines, only 0.06 to 0.002 percent of the 0.5-6.7 percent of the "impacted" avian flights in the study area would be expected to result in collisions (excluding raptors and gulls) (Meyer, 1978; Willdan Assoc., 1981, 1982 as cited in Appendix C, Section II). Based on these analyses, only 1 to 400 flights in every 10 million would result in avian mortality as a result of collisions with structures in the Midbayfront. This rate of mortality was calculated under assumptions that entire grid cells would be impacted by buildings, even though buildings occupy only a minor portion of the cell, and that prominent buildings would have the same visual characteristics and collision probability as more threatening transmission lines. As such, we do not consider this expected rate of mortality to reflect a significant concern.

It should be noted, as cited in Avian Flight Patterns Investigation (Section II of Appendix C), that on a national level, the estimated annual avian mortality directly associated with human activities (including hunting) is less than 3 percent of all annual avian mortality, and only approximately 1 percent of all annual avian mortality results from collisions with man-made objects. The vast majority of reported collision incidents come from the eastern and central United States. Of these, those avian mortalities associated with "hundreds of millions of kilometers of communication (and transmission) lines . . . may represent the largest source of avian mortality" (Avery, 1979). Where structures are concerned, the vast majority of the collisions reported are associated with passerine families and not waterbirds,

even though some of the most threatening of structures, such as powerplant cooling towers, are frequently built right on the waterfront (see Avery et al., 1980).

3.3.1.2 Collisions

The potential for collisions with windows is increased when reflective glass is used or a perception of through flight is provided. To address this concern, EIR recommendations previously called for the use of non-reflective glass. Since the circulation of the August 1990 DEIR, additional design criteria have been proposed by the applicant to address these issues (CVI's proposed "Design Requirements" Regarding Impact Mitigation Measures for Midbayfront EIR, Section II: Reduction of Potential for Bird Strikes, available for public review at the City of Chula Vista). These design criteria are expected to reduce the limited potential for bird/building collisions even further by:

1. Prohibiting both glassed-in see-through corridors on building exteriors, and other design arrangements where the use of glass will suggest open space beyond the glass,
2. Using non-reflective glass for all building exteriors except for east-facing exteriors,
3. Minimizing the use of large picture windows which overlook wetland areas,
4. Encouraging the use of architectural features which inset or shade window areas,
5. Using architectural details that obscure windows facing wetland areas, where practical, and
6. Suggesting that windows be tilted or angled inward to reduce the likelihood of bird strikes.

3.3.2 Biological Effects of Lighting

Two commentors had a concern about night-lighting of structures and the nearby wetland habitats. The issues associated with lighting revolve around potentially increased levels of predation by nocturnal hunters, potential abandonment of lighted habitats, and potential collision mortality associated with building lighting.

3.3.2.1 Lighting Literature

We know of no identified substantial adverse effects of lighting within wetland areas, however reasonably foreseeable effects could include abandonment of night-roosting areas and increased efficiency of nocturnal predators. It has frequently been suggested that nocturnal rodents are less active on moonlit nights as an adaptive response to higher predation pressures. A literature search through the Office of Information Transfer was conducted on the subject of artificial lighting and birds by Martin Kenney of the USFWS. This search resulted in the identification of only one reference on the subject of lights and habitat utilization or predation. This one paper noted apparent incidental foraging by a

Bittern within an artificially lighted area, presumably recognizing a benefit of the lighting (Reed, 1978). The general lack of reports may suggest a low occurrence of predation; however it is extremely difficult to determine the actual effects of artificial lighting without extensive study.

In that information is not available, a conservative approach is being taken by the project applicant and the EIR consultants. The applicant has prepared design lighting standards for incorporation into the proposed project. This lighting program has the objective of reducing the potential adverse effects of lighting from the Midbayfront project on wildlife in the National Wildlife Refuge. To accomplish this goal, the applicant has proposed a variety of measures (Section III: Reduction of Potential Adverse Effects of Lighting of the proposed "Design Requirements" available at the City of Chula Vista) for structural and operational requirements and restrictions which include:

1. No lights shall be allowed in the 100-foot wide primary zone adjoining the boundary of the National Wildlife Refuge, except for low voltage safety lighting mounted no higher than three feet above the ground.
2. For buildings nearest the NWR, the vertical faces fronting on the NWR shall not be floodlit, and the windows facing the NWR shall contain tinted glass.
3. The use of searchlights and ceilometers shall be prohibited.
4. For building faces not oriented toward the NWR, floodlighting of building exteriors shall be subject to a protocol to be developed by CVI and subject to the approval of the USFWS and the City.
5. In the area adjoining the primary zone, and along Marina Parkway and "F" Street in the vicinity of the "F" & "G" Street Marsh, street lighting shall be shielded commensurate with safety requirements to minimize illumination of the wetlands.
6. As much as feasible, lighting for tennis courts shall be shielded to direct light away from the NWR. Also, tennis courts will not be lighted after 11 p.m.

This lighting program has been developed to an adequate level to provide satisfactory assurance of a non-significant effect associated with lighting at a plan-level EIR. Associated considerations include reduction of bird collisions associated with light attractions. The design criteria outlined above require development of specific plans through coordination with the City of Chula Vista and the USFWS. These specific plans should be subject to project-level environmental review.

3.3.3 Raptor Perching and Predation Pressures

Several comments were received with respect to concerns over the impacts of increased predation within the National Wildlife Refuge as a result of the development. Specifically, concerns focused on avian predator use of tall buildings, loss of foraging habitat resulting in an increased prey demand within sensitive refuge lands, increases in mammalian

predators in marshland areas, and the potential ineffectiveness or long-term commitment to an effective predator management program. In addition to the concerns over the impacts of the project and the commitment of the applicant to the plan, three commentors took exception to the use of a multi-jurisdictional entity to oversee the implementation of the management program.

3.3.3.1 Species Utilizing Building Perches

A concern was raised about which raptors would be expected to utilize various buildings as perch sites. As is indicated in Volume II (pg. 3-92), Peregrine Falcons (*Falco peregrinus*) do tend to select higher perch sites than other raptors; however, raptors are an adaptable group of birds, and other species besides Peregrine Falcons would not be precluded from using buildings or other project associated features as perch sites. This is especially true when more favorable perch sites are not available or are removed. Observations by PSBS personnel during the Avian Flight Pattern Study indicated that Red-tailed Hawks (*Buteo jamaicensis*) regularly perched on top of the Rohr building (approximately 70 feet) and on top of the SDG&E transmission towers, at heights above 150 feet. It should be noted however, that several of the less tolerant raptor species would be expected to abandon the bayfront site altogether.

3.3.3.2 Building Design Reduction of Perch Sites

The concern over tall buildings as they affect aerial predators revolves around their use as stationary hunting perches. Raptors which may use such perches are frequently benefitted in their foraging abilities. To address this concern, the applicant has proposed a variety of project features which serve to reduce the utility of such structures as efficient hunting perches. The project design incorporates spatial buffers which have been previously discussed in both the LCPR No. 8 and DEIR documents which serve to reduce the threat of low perch sites. Where high rise buildings are proposed, the applicant has commissioned the development of design criteria which would substantially reduce the utility of buildings as perch sites (Section I: Reduction of Predator Pressures of CVI's proposed "Design Requirements" report). These criteria include:

1. All building faces oriented toward, and having a line-of-sight view to the NWR shall be designed to preclude horizontal projections wider than two inches, unless the projection is declined at a 45 degree angle or greater. To determine which portions of given buildings are subject to these design requirements, the applicant has the option to prepare a line-of-sight analysis of the proposed project.
2. All structures with roofs that could provide potential perching or nesting sites for raptors shall be equipped with false fronts to block the line of sight to the NWR. The false fronts shall extend at least three feet higher than any potential perching or nesting site, and the upper surface(s) of the false front shall feature anti-perching material.

3. All openings in buildings susceptible to roosting or nesting use shall be appropriately screened to prevent roosting and nesting of pest species e.g., European Starlings, House Sparrows.
4. Antenna structures, radio towers, and any similar structures shall be prohibited unless fully enclosed in a housing approved by the City of Chula Vista, the USFWS, CDFG, and CVI. Throughout the development, all project-related electric power and telephone lines shall be underground, unless specifically approved by the City after consultation with the USFWS.

As can be seen from the above, criteria 1 and 4 call for information which is not available at the current plan level, (i.e., line-of-sight analysis, accessory structure design), however, such information could be provided at a project-level. For this reason, these items need to be addressed at a project-level environmental review.

3.3.3.3 Concentration of Aerial Predators

An issue raised over the loss of upland foraging habitat was the potential concentration of hunting pressures within uplands and wetlands of the NWR. As was previously indicated, many of the raptors currently utilizing the bayfront are fairly intolerant to human encroachment and are wide ranging. For these reasons, it is expected that the general numbers of these species would be reduced under the proposed project or any of the alternatives. It is generally believed that the bayfront is not an area which is prey resource limited. For this reason, it is not expected that the combined loss of uplands with a concurrent reduction in raptors will ultimately result in a long-term concentration of predation pressures.

3.3.3.4 Reduction of Mammalian Predator Activity

Increases in mammalian predator activity within the National Wildlife Refuge are expected to occur as a result of the proposed development. To address these concerns, the applicant has proposed design-level measures to alleviate possible impacts (Section I: Reduction of Predation Pressures of CVI's proposed "Design Requirements"). These measures specify the development of a Predator Management Plan, which will include specific standards for design, operation and maintenance of enclosures for refuse bins, cans and other features (e.g., fences, landscape features, etc.) that may attract potential mammalian predators. The plan provides for regular reporting and trapping of mammalian predators, should they become a problem. The Midbayfront development will also be governed by CC&Rs (Conditions, Covenants and Restrictions) that prohibit the residence or presence of any cats and dogs (except guide dogs for the blind) within the project area. The use permit for the project will specify signage which indicates that domestic dogs and cats are prohibited in all areas of the development. The effectiveness of these measures will depend upon the ultimate Predator Management Program. Though the above-mentioned standards provide some guidance as to what will be incorporated into the program, the plan should be developed in full detail and incorporated into the environmental review process in the project-level EIR.

Areas which are not adequately addressed in the design specifications include enforcement actions under the plan to ensure compliance with the measures specified therein. This is a specific concern relative to domestic animals and maintenance of refuse containers. The plan should also work in concert with the design specification items identified in Section IV: Control of Human Activities to Reduce Impacts on Wildlife, contained in CVI's proposed "Design Requirements." With regard to the control of human activity, four measures are related to enforcement actions:

1. The prohibition of construction activities within 200 feet of marsh or mudflat habitats of the NWR between 15 March and 31 August. During this period, non-stationary construction cranes will lower their booms when not in use so that the booms will not be used as perch sites for raptors.
2. A signage system, which serves both interpretive and prohibition-of-entry proposes, shall be designed, installed, and maintained by the project applicant, subject to the approval of the USFWS and the City.
3. Subject to the approval of the USFWS, CDFG and the City, overlook areas will be designed and installed to allow views of portions of the National Wildlife Refuge. The overlook sites will be selected so that their installation and use will have no significant adverse effects on wildlife or marsh habitats.
4. Human activities within a 100-foot wide primary zone adjacent to the NWR border shall be limited to passive recreational use, including pedestrian trails and nature interpretation.

In addition to these measures, CVI proposes several site design features, which include design elements for buildings, landscaping and buffers, to prevent human disturbance of wildlife and habitats within the NWR. These features include:

1. A 100-foot wide primary zone adjacent to the NWR border. No buildings shall be placed within this zone.
2. The landscape treatment for the primary zone shall include an earthen berm, native coastal sage scrub and other transitional vegetation, and a fence capable of preventing access to the NWR by people, dogs and cats. The earthen berm, along with the vegetative cover, shall effectively block the line of sight between the NWR and the open space active use areas landward of the primary zone.
3. Large diameter culverts shall be installed under Marina Parkway to promote the interchange of water and wildlife between the existing "F" & "G" Street Marsh and the proposed wetland enhancement area to the west.
4. The "F" & "G" Street Marsh shall be protected by a berm/fence/planting system to block the view of street activities from the marsh areas, and to substantially reduce any visual or noise effects on the marsh from the surrounding development or other activities.

Again, these project-level details should be developed and reviewed as a part of a project level analysis.

3.3.4 Losses of Raptor Foraging Habitat

A mixed group of comments were received on this issue. Comments ranged from a concern that the analysis was flawed since the prior approved LCP had already permitted the loss of raptor habitat (and thus the proposed project would not result in a changed condition), to a request for incorporation of recommendations for mitigation. The most critical comments regarding this issue involved (1) a request for additional discussion of the basis for the determination of significance, and (2) questions concerning mitigation of the loss if the Midbayfront does constitute significant raptor foraging habitat.

3.3.4.1 Raptor Foraging Habitats and Prior LCP

Pacific Southwest Biological Services recognizes that the prior approved LCP permitted the loss of raptor habitat; however, contentions that the findings of the August 1990 DEIR are flawed with regard to the Midbayfront's value as raptor habitat are invalid. Since 1985, PSBS personnel have been working at the bayfront and monitoring the biological resources there. During this 5 year period, personnel have accumulated well over 2000 hours at the bayfront, with much of that time spent in systematic observation of resources. In addition, PSBS has evaluated the significance of the bayfront on a regional perspective. As such, the findings of the DEIR are based on a complete understanding of the biological resources and significance of the Midbayfront area.

One of the commentors indicated that the existing certified LCP would still result in loss of raptor foraging habitat. It should be noted that the DEIR for the proposed project includes a no-development alternative that would leave the Midbayfront in its present state, and would thus preserve the value of the Midbayfront area as habitat for raptors.

3.3.4.2 Unmitigable Loss of Raptor Foraging Habitat

Incorporation of mitigation measures into a future environmental review document is a difficult task for the reason outlined on pg. 3-102 of Volume II: "Due to the limited extent of similar coastal habitats...the loss of habitat would be considered...unmitigable." In the San Diego region, there are only a few sites where such uplands occur adjacent to similarly productive aquatic and wetland habitats. These areas include the MKEG property at the Otay River, portions of the Tijuana River Valley, the Naval antenna site, Delta Beach Naval lands, and Fiesta Island in Mission Bay. The next sites which support similar resources are located approximately 22-23 miles to the north at Los Peñasquitos Lagoon, and 24 miles north at San Dieguito Lagoon. Somewhat similar habitats occur on the east side of Lower Otay Reservoir and around Sweetwater Reservoir. Management practices and encroachment into these areas have restricted the usefulness of some of these areas. As such, the loss of any heavily utilized site, such as the Midbayfront, would constitute a significant impact on raptor habitat. CEQA provides the option for mitigation out-of-kind. Under present conditions where there are few areas of upland habitat next to wetlands, however, no out-of-kind mitigation measure could adequately compensate for the significant

loss of valuable, and effectively unreplaceable, raptor habitat due to the proposed development.

3.3.4.3 Significance of Site as Raptor Foraging Habitat

As requested, a more thorough discussion explaining the basis for the determination of the Midbayfront's significance as raptor habitat has been provided. This information includes the following:

Relative to raptors, the Chula Vista bayfront encompasses three distinct habitat types: salt marsh, open shore and shallow ponds, and fallow field uplands. This combination of upland and wetland habitats within one area supports a faunal array that would not exist if only one habitat type were present. An abundance of upland prey species, particularly Desert Cottontail (*Sylvilagus audubonii*), California Ground Squirrel (*Spermophilus beecheyi*), small rodents, doves and pigeons, and small passerine birds exists in proximity to a large and diverse community of waterfowl and shorebirds. Furthermore, these prey items exist in a relatively open area with limited human disturbance.

The abundance and diversity of potential prey types and body sizes at the bayfront provides an outstanding prey base that supports a variety of raptor species. A diverse population of predatory birds that includes accipiter, buteos, falcons, kites, Osprey (*Pandion haliaetus*), and owls utilize the site, especially during the winter months. Some species such as the Red-tailed Hawk (*Buteo jamaicensis*), American Kestrel (*Falco sparverius*), and Northern Harrier (*Circus cyaneus*) can be seen on any day. Barn Owls (*Tyto alba*) are probably also in this category, but they are nocturnal and are more difficult to observe. Black-shouldered Kites (*Elanus caeruleus*) and Ospreys are noted very frequently while other species, such as the Peregrine Falcon (*Falco peregrinus*), Merlin (*Falco columbarius*), Prairie Falcon (*Falco mexicanus*), Cooper's Hawk (*Accipiter cooperii*), Burrowing Owl (*Athene cunicularis*), and Short-eared Owl (*Asio flammeus*) are seen regularly though less often. Many of these raptor species observed at the bayfront are uncommon or rare in San Diego County (Unitt, 1984). Their presence at the bayfront, as well as general length of stay and fidelity to the site are clear indications of the bayfront's value to raptors.

Though there has been an apparent decline in use of the bayfront by some raptor species, usage is nevertheless still quite intense. The decline in use does not reflect decreasing importance as habitat for raptors, but rather reflects gradually increasing impacts associated with human encroachment and disturbance in the area. Intense foraging activities and site fidelity testify to the value of the bayfront for raptors that continue to use the site. The importance of the bayfront to wintering raptors can be inferred from the diversity and abundance of raptors using the site, but it is necessary to also consider the scarcity and limited extent of similar areas of habitat in the region.

"Incidental occurrence" (August 1990 DEIR pg. 3-78) of some raptors at the bayfront does not suggest a lack of importance to those species. Rather, the "stable level of incidental occurrence" (August 1990 DEIR pg. 3-78 and Volume II pg. 3-99) indicates that the bayfront is included within the movements of species or individuals with large home ranges. Less than total fidelity to the bayfront by these raptor species does not suggest that the site is unimportant. Rather, the bayfront is viewed as valuable enough to utilize during wide-ranging hunting activities, in spite of its small size and isolation from other habitats.

Discrepancies between observed raptor numbers and apparently low levels of use suggested by the flight activity data of the Avian Flight Pattern Study arise from sampling biases against stationary birds. Individuals must move from one grid square to another before they are recorded. Since many raptor species hunt by scanning from perches for long periods, their presence and activities are under-represented in the flight data. Just as multiple flights may be attributed to one active individual, so can a small number of flights be attributed to several individuals that are less active. The statement that Red-tailed Hawks forage "infrequently throughout the study area" (Appendix C, Section II, pg. 49) is a case in point, and is unfortunately misleading with regard to Red-tailed Hawk populations and use of the site. This statement was clarified in the final document. "Foraging" connotes active searching through movement from one area to another. In fact, this species was always present at the bayfront, but individuals spent long periods scanning from perches, with comparatively few flights. The usage of the site by species such as Northern Harriers and Black-shouldered Kites, which fly extensively over the site as they hunt, will be more accurately reflected by the flight activity data. For these species, however, flight data may suggest larger populations than are actually present. It must be emphasized that flight activity data are specific to flight activity, and do not give reliable estimates of population sizes, or accurate indications of usage by stationary species.

With regard to the "low" number of raptors utilizing the bayfront; raptors are top predators in their food webs, and therefore their numbers are naturally low in comparison to populations of fauna lower on the web. Four days of observation per month, though adequate to differentiate the flight patterns of common species, cannot be considered intensive study of raptors, and are inadequate to accurately quantify usage by species that are naturally uncommon or rare. As such, the single observation of any uncommon raptor is important and noteworthy since, under the sampling regime, the probability of sighting an individual of an uncommon species is relatively low. Furthermore, under the sampling regime, the observation of an uncommon or rare species on more than one sampling day is a strong indication of fidelity to the bayfront, given that home range sizes of some species can be up to 50 square miles.

In summary, neither population estimates for raptors nor the importance of the bayfront to raptors can be derived or inferred from flight activity data. Recent population declines do not indicate decreases in the importance of the bayfront as raptor habitat, but incremental degradation of the site's resources.

Population estimates and statements concerning the same are derived from observations other than flight activity data. Raptor populations at the bayfront are probably a function of prey availability, low human disturbance levels, and the scarcity of such sites in the region. The species by species raptor population estimates and activities observed at the bayfront during the Pacific Southwest Biological Services Avian Flight Study follow:

- **Barn Owl (*Tyto alba*)**

Barn Owls were seldom observed during the study. This species probably used the site regularly, but was difficult to observe because it is almost exclusively nocturnal and survey periods were restricted to daylight hours. A barn owl was seen foraging prior to daylight on one occasion and at very late dusk on another. During the second observation it captured a prey item, and has therefore been seen to hunt successfully on site. Individual(s) of this species may have roosted in the abandoned greenhouses; however, these structures were removed near the end of the avian study. The population using the site consists of 1-2 individuals. This species is described as an uncommon but widespread resident of San Diego County (Unitt, 1984).

- **Short-eared Owl (*Asio flammeus*)**

This species was observed over a period of several weeks. An individual was discovered when it was flushed during the morning hours by a Ferruginous Hawk. Subsequent observations were made after sunset as a result of focused searches at the end of Flight Study field days. The population using the site consists of 1-2 individuals. Short-eared owls are rare to uncommon and localized winter visitors (Unitt, 1984).

- **Burrowing Owl (*Athene cunicularis*)**

This species was observed regularly. It is a resident on the site, but is probably present in small numbers. The population using the site consists of 2-3 individuals. This species is uncommon in the County and their populations are declining (Unitt, 1984).

- **Osprey (*Pandion haliaetus*)**

Ospreys were commonly observed foraging along the bayfront and in the Sweetwater River Channel. They flew over terrestrial areas and marsh tidal channels occasionally. The population using the site consists of 2 or more individuals. Ospreys are uncommon fall and winter visitors (Unitt, 1984).

- **Black-shouldered Kite (*Elanus caeruleus*)**

Black-shouldered Kites were common on the site. They were observed while they foraged and as they perched on telephone poles and bushes. They were often

seen feeding on small mammals. This species foraged over much of the uplands, but individuals seemed to prefer the dry marsh area along "F" Street. The population using the site consists of 2-4 individuals. This species is a fairly common resident (Unitt, 1984) but their population has declined over the past few years.

- **Northern Harrier (*Circus cyaneus*)**

Northern Harriers were among the most commonly observed raptorial birds at the bayfront. They foraged throughout the site. Two pairs used the site regularly during the study, but three pairs were observed on at least one occasion. Two pairs are believed to nest in the wildlife refuge, however, the avian flight study did not continue into the nesting season so the level of use during that time was not determined. The population using the site consists of 4 or more individuals. This species is an "uncommon to fairly common migrant and winter visitor, rare and localized summer resident" (Unitt, 1984).

- **Sharp-shinned Hawk (*Accipiter striatus*)**

This species was observed on numerous occasions over a period of several weeks. It was observed as it scanned from a perch and as it flew rapidly (as if in pursuit of a distant target). The winter population using the site consists of 1 or more individuals. Sharp-shinned hawks are uncommon migrants and winter visitors, extremely rare in summer (Unitt, 1984).

- **Cooper's Hawk (*Accipiter cooperii*)**

Cooper's Hawks were also observed on many occasions as they foraged over the site and scanned from a perch. The population using the site consists of 1-2 individuals. This species is an uncommon migrant and winter visitor, and a rare summer resident (Unitt, 1984).

- **Red-shouldered Hawk (*Buteo lineatus*)**

This species was observed on only one date; however, the individual spent a considerable amount of time perching and foraging during that day's observation. The lack of suitable woodland habitat in the vicinity is the probable reason that this species does not forage on the site more frequently. Red-shouldered Hawks are uncommon to fairly common residents in the County (Unitt, 1984), however, their numbers have generally been up relative to other raptorial species.

- **Swainson's Hawk (*Buteo swainsoni*)**

A Swainson's Hawk was observed on only one date and was most likely a migrating individual. This species is an uncommon spring migrant, a very rare fall migrant. The local breeding population has been extirpated (Unitt, 1984).

- **Red-tailed Hawk (*Buteo jamaicensis*)**

Red-tailed Hawks were extremely common on and over the property. They were often seen perching on power poles and snags on site, or on towers overlooking the site. They were frequently observed feeding on both ground squirrels and rabbits. Territorial interactions between pairs were noted on several occasions. One individual was observed to scan as it perched on top of the Rohr Building, then fly down into the "F" & "G" Street Marsh and catch a Snowy Egret. Two pairs are believed to reside in the area and forage on the site. During the winter, the population of Red-tailed Hawks using the site increases with an influx of winter visitors. The population using the site consists of 4-6 or more individuals. This species is a fairly common resident and winter visitor (Unitt, 1984).

- **Ferruginous Hawk (*Buteo regalis*)**

One individual was seen in the vicinity of the bayfront for two weeks or more, but it was observed in the Avian Flight Study on only one date as it foraged over the site and attacked a Short-eared Owl. Ferruginous Hawks are regular but uncommon winter visitors to southern California where they typically inhabit extensive open fields or grasslands (Unitt, 1984).

- **Golden Eagle (*Aquila chrysaetos*)**

This species was observed on only one occasion. Despite the large amounts of prey found on the property, Golden Eagles are not expected to utilize the site frequently. Golden Eagles are uncommon residents in San Diego County (Unitt, 1984).

- **American Kestrel (*Falco sparverius*)**

Kestrels were very common on the property, and along with the Northern Harriers, were the most active raptors present. Kestrels were observed most often as they perched on telephone poles along dirt and paved roads in the vicinity, but they also foraged over the site by flying and hovering. The population using the site consists of 4-6 individuals. American Kestrels are fairly common residents in the county (Unitt, 1984).

- **Merlin (*Falco columbarius*)**

Merlins were observed regularly on site in the fall and early winter months. They foraged over the site and scanned from perches. The population using the site consists of 2 or more individuals. Merlins are rare winter visitors that are usually seen around agricultural fields or in grassland, but they are also attracted to mudflats frequented by large flocks of shorebirds (Unitt, 1984).

- **Peregrine Falcon (*Falco peregrinus*)**

A pair of Peregrine Falcons have recently nested beneath the Coronado Bay bridge, within 5 miles of the bayfront, and now reside in the area. Although there were only a few sightings of this species during the Avian Flight Study, individuals are seen regularly around the bayfront throughout the year. During the study, Peregrine Falcons were observed as they perched on telephone poles along dirt roads, on powerline towers adjacent to the site, as they flew over the site, and as they swooped on Mourning Doves (*Zenaida macroura*). The population using the site consists of 2 individuals. Some individuals may have been migrants, therefore, more than 2 individuals may have utilized the site. "Peregrine Falcons are seen most frequently along or near the coast, especially around mudflats, shores, or ponds where large numbers of water birds congregate" (Unitt, 1984). They are seen very rarely farther inland (Unitt, 1984).

- **Prairie Falcon (*Falco mexicanus*)**

Prairie Falcons were observed mainly during the fall and early winter months. They were observed more commonly than were Peregrines. Prairie Falcons were seen as they perched on powerline towers and telephone poles, and as they circled over the site. An unidentified falcon that was seen perching on top of the Rohr Building may have been an individual of this species. The presence of a Prairie Falcon resulted in an immediate disturbance of avian prey, particularly among the Killdeer (*Charadrius vociferus*) and other small shorebirds. On one occasion, an individual perched for several minutes before it attacked a Mourning Dove approximately 3600 feet away. Attempts on Mourning Doves were noted on several occasions; however, only one successful kill was observed. The population using the site consists of 1-2 individuals. Prairie Falcons are rare to uncommon winter visitors, and rare breeding residents (Unitt, 1984).

To further summarize the use of the site by raptors, 17 species of raptorial birds were identified as utilizing the site on a resident or seasonal basis. Cumulatively within the group, 31 to 42 or more individual birds may be involved. The relative importance of the site to the various species and individuals is indisputably quite variable; however, the sheer number and diversity of raptors found utilizing a site of less than 220 acres are considered quite remarkable.

3.3.5 Impacts of Vector Control Requirements

Three commentors noted that the proximity of the proposed project to the Refuge wetlands would be likely to result in increased problems associated with insect pests and potential disease vectors. These comments were followed up with an observation that where factors of human health and safety are concerned, control measures are always dictated. For this reason, a request was made to address this issue in the EIR. Pacific Southwest Biological Services recognizes that this substantial issue should have been identified as a concern in the DEIR, and the lack of such identification was an oversight. The following discussion was included in Volume II pg. 3-101).

3.3.5.1 Expected Project Requirements for Vector Control

It may generally be assumed that the proximity of the proposed development to such extensive wetlands as are found in the Sweetwater NWR will eventually result in conflicts between people and insect pests. In these situations, public safety and, generally, "comfort" have always prevailed as overriding considerations in the determination as to whether or not to implement a vector control program. There are several methods for dealing with vector problems. It must be recognized that control measures can adversely affect non-target species and may even result in negative ecological consequences when only the target pest species are affected. For this reason, control methods must be chosen that offer a minimum of compromise of the goals and purposes of the Refuge, while still abating the vector problem to a satisfactory degree. The least damaging measure for dealing with potential insect pest problems, and one that is presently incorporated into control measures in Florida, is to impress upon prospective tenants and other users of a development that they are choosing to live/recreate next to a wildlife refuge, and that there could be insect pest problems. These citizens must recognize that they are there of their own will, and as such, they should be willing to experience nature to its fullest. For their part, sellers of residential units must bear the responsibility of informing prospective buyers of potential vector problems.

Humans are an extraordinarily adaptable animal, and people are already demonstrating their ability to deal with insect pest problems on a personal level in Florida by adapting their lifestyles to the situation. Furthermore, life is not free of risks and annoyances, and to expect or demand such is to not recognize basic realities of existence.

Unfortunately, present attitudes in southern California do not appear to encompass this approach. Examples of adaptations currently in use elsewhere in the United States include going indoors before dark, and screening off of areas that people want to use (e.g., swimming pools, balconies). As it is likely that a vector problem will be identified at some point in the future, a pre-emptive plan to address this problem should be developed as part of any project proposed for the site. The plan should include measures to identify precise vector problem areas, seeking to address true health risks and not merely nuisance insect problems. The plan should identify measures to minimize treatment requirements. Finally, the plan should identify control techniques which are least damaging to the environment and non-targeted organisms.

3.3.5.2 Appropriate Vector Control Measures

It should be noted that implementation of vector control measures may be required in portions of the National Wildlife Refuge. Such measures are not unknown in National Wildlife Refuges, and are, in fact, a reality in the Tijuana River Estuary, where residents living adjacent to the Refuge demand insect pest abatement. In that situation, vector control measures are allowed under terms specified and strictly controlled by the U.S. Fish and Wildlife Service.

Some methods that were considered acceptable several decades ago, such as ditching to drain areas of standing water, are inconsistent with present goals and policies of wetlands

protection, and are now generally unacceptable. Chemical control methods can be effective, but even substances that are fairly target specific, such as Golden Bear (a petroleum product which suffocates mosquito larvae), can still cause mortalities among non-target species. As such, the viability of extensive chemical control of vectors in a federal wildlife refuge is questionable.

Biological control methods, including the use of BTI (a bacterial treatment) in wetlands, and the introduction of fish that eat mosquito larvae into man-made ponds, lagoons and basins may hold the greatest promise for appropriate vector control. Unfortunately, each of these options has its own limitations. Non-chemical, non-biological vector control measures for areas of standing water actually created by the development (e.g., ponds) include reducing the area of calm standing water by keeping water circulating (e.g., with fountains) or by flushing out ponds regularly according to the lifetime of larval stages.

3.3.5.3 Requirements of a Vector Control Plan

No matter what approach to vector control is taken, the ultimate development and implementation of a specific vector control plan is a project-level task that must be undertaken under the guidance and terms of appropriate resource agencies. Such a vector control plan undoubtedly will be quite controversial and will need to be evaluated in a project-level environmental review process.

3.3.6 Ratios of Habitat-based Mitigation Recommendations

In several instances, the review of the project has resulted in the identification of impacts and recommendations to mitigate these impacts by providing compensatory habitat within lands on the Refuge banked for such purposes. One commentor requested information on how a 13.2 acre degradation of resource value impact was calculated for marshlands along the fringe of the Midbayfront development area. The Coastal Commission commented that they had not officially agreed to any mitigation ratios proposed by the applicant or recommended in the DEIR and that these would be subject to separate Commission review.

3.3.6.1 Identification and Quantification of Loss of Habitat Value

The degradation of habitat quality was identified in several portions of the DEIR as a result of increased predator pressures, human encroachment, drainage impacts, etc. In these situations, it is not as easy to clearly define the extent of the potential effects of the project, as it is where direct footprint impacts are considered. For these reasons, impact evaluation relies on not only established information but also a considerable amount of professional assessment based on experience, reason and observation. As noted previously, PSBS has been working at the bayfront, and monitoring the biological resources there since 1985. In that time, PSBS personnel have accumulated well over 2000 hours in the area, with much of that time spent in systematic observation of resources. As such, there is a strong base of both experience and knowledge on which to evaluate impacts to the biological resources of the Midbayfront area. In the case of the identified degradation along the wetland fringes, impacts were evaluated for both real threats (i.e., predator and competitor pressures and human and pet encroachment) as well as the resulting impacts of "perceived" threats (i.e.,

avoidance responses or modified habitat utilization patterns) which are associated with avian behavior in the vicinity of predators or perceived predator threats. This is discussed on pp. 3-91 through 3-97 of Volume II. The analyses of these issues identified an absence of perceived threats within the sensitive marshlands. True predation and disturbance factors were, however, identified as factors which would be expected to result in degradation of resources and resource values in these areas.

The precise extent of these impacts is unknown, although observations within Vener Pond, "E" Street Marsh and the Sweetwater Marsh have suggested that domestic animal intrusion into these areas has generally been restricted to the drier fringes of the marshlands, with some exceptions being due to the activities of retriever type dogs. Further, human encroachment tends to exhibit similar patterns (in which muddy sediments and water tend to act as an effective barrier to deep penetration into the marshlands). Because the vast majority of the intrusion by humans, domestic animals, and presumably a number of other mammalian predators would be restricted to the "dry" marsh fringes, the area considered to be degraded by this type of impact was presumed to be of similar extent. The intent of this assessment was to consider both the presence of proposed buffers and predator management programs. For this reason, it was anticipated that the estimated intrusion to the point at which soft mud and/or water is encountered (100-150 ft) would be adequate with no additional buffer since the levels of these threats would already be greatly reduced by other measures.

3.3.6.2 Determination of Appropriate Compensation Requirements

Given the expected degree of the impacts into the marshlands, the areas of the Midbayfront shoreline which were of greatest concern were determined. It was concluded that these constituted all of the marsh shorelines found on Vener Pond, "E" Street Marsh and the Sweetwater Marsh. No such degradation impacts were considered to be of concern at the "F" & "G" Street Marsh due to the current state of the system and the other proposed restoration factors. Further, no such inclusion was made for the San Diego Bay shoreline since the activities engaged in by birds in these areas are not as susceptible to predator or encroachment concerns. For this reason, a total wetland degradation impact area of 13.2 acres of marshlands was determined on the basis of a 150 foot-wide belt of saltmarsh and pond fringe habitat impacted over a 3840 foot long segment of the Midbayfront.

Because these marsh areas would not be lost but merely degraded in their utility to certain species, a 1:1 replacement ratio in an area away from the development area was believed to be appropriate over higher ratios generally associated with mitigation for complete losses of habitat or delays in implementation of the mitigation program.

A similar situation occurs at the small detention basin near the "F" & "G" Street Marsh. The brackish marsh would be excavated and converted to a low-flow percolation basin and a storm-flow detention basin. Following initial site construction, the maintenance required at this basin should dramatically decrease, and brackish marsh habitats would be expected to develop within the basin. Because these resource values are not lost, as they would be if the basin were lined, covered, or if the marshland was simply eliminated, mitigation is designed to off-set: (1) an interim loss of habitat associated with construction, and (2) a

degradation of the habitat associated with infrequent but necessary maintenance silt removal. In this instance, the 3.2 acre-freshwater (brackish) marsh which is to be lost would be replaced by the creation of a 3.5 acre-freshwater (brackish) marsh and 4 acres of coastal saltmarsh adjacent to the existing "F" & "G" Street Marsh. The resulting ratio of mitigation land would be 2.3:1 replacement in recognition that basin values are not completely lost.

3.3.6.3 Responsible Agency Purview

It should be noted that the project review and recommendations outlined in the biological section of the DEIR have been made on the basis of biological resource considerations and CEQA responsibilities. Under CEQA, the lead agency has the requirement to consider impacts and mitigation measures which are truly linked. While out-of-kind mitigation is possible, there is still a requirement for the mitigation to off-set the actual impact and not unrelated issues. Several agencies may have additional permit or approval requirements which are mandated or provided for under their jurisdictional authority. These include such agencies as the U.S. Army Corps of Engineers, the California Coastal Commission, the City of Chula Vista, etc. It is not the intent of this document to attempt to dictate the actions of these agencies. Instead, it has been the goal to review the project and make sound biological recommendations which may or may not mesh with other agency permit responsibilities and policies.

3.3.7 Isolation of the "F" & "G" Street Marsh

Several comments received identified a concern over isolation of the "F" & "G" Street Marsh and under-valuing its inherent restoration potential. The CDFG and USFWS recommended various alternatives to enhance the linkage of the Marsh with habitats of San Diego Bay and/or the "E" Street Marsh.

3.3.7.1 Clarification of Isolation Issues

The "F" & "G" Street Marsh is part of the federally-managed Sweetwater Marsh National Wildlife Refuge. As such, it is recognized that protection and enhancement of resource values are important goals of the USFWS.

The DEIR has also indicated that the "F" & "G" Street Marsh is substantially disturbed and degraded by poor hydrologic characteristics. The intent was not to suggest that this Marsh would not benefit from further connection with San Diego Bay and/or the "E" Street Marsh. In fact, quite the opposite is true. We have recommended on pp. 3-90 and 3-92 of Volume II several enhancement programs which would serve to buffer the "F" & "G" Street Marsh from current and possibly future degradation while expanding its connection with the bay. The recommendations made in association with the implementation of enhancement plans included expansion of the Marsh, correction of poor hydrology, use of native upland buffer vegetation and hidden fences along access points, restriction of park uses near the Marsh, and inclusion of large half round culverts to create a suitable Marina Parkway underpass. Clearly there are a variety of factors which would improve this marsh in even more dramatic ways; such as the creation of a marshland link between the "F" & "G" Street and "E" Street marshes, use of a long and narrow piling-supported bridge at Marina Parkway, and creation

of additional marshland from parklands near the bay. These opportunities are clearly supported biologically; however, they are not considered a requirement to mitigate the anticipated impacts of the proposed project.

With regard to concerns that the proposed development will result in an isolation of the "F" & "G" Street Marsh, it is necessary to consider the existing ecological connections between this area and other nearby habitats. It is also important to note the current impingements on the Marsh by existing disturbance. As previously indicated, avian flights to and from the "F" & "G" Street Marsh are primarily direct east-west movements from San Diego Bay and for some groups of birds may be even more concentrated along the narrow "F" and "G" connector channel. Overland approaches from the north, east or south are extremely rare. Further, no native upland habitats occur in the immediate area of the Marsh and connections with upland ecosystems are generally through predation by raptors and mammalian species including domestic dogs, cats, black rats, and Virginia opossum. These are not considered to be desirable features of the current conditions. The Marsh is currently bordered on three sides by a heavily utilized roadway ("F" Street and the existing "F" and "G" connector road -- Marina Parkway) and Rohr Industries' Building 61. To the north and east are open field buffers between urban Chula Vista and the marshlands. Because of this arrangement, the "F" & "G" Street Marsh is, and will always be, primarily a marine-influenced avian habitat area.

As stated in the Avian Flight Patterns Investigation (Part II of Appendix C)

Waterbird activity levels were found to be extremely low within the proposed upland development areas Further, flights were found to be generally low-level localized movements between wetland areas The effects of buildings on flight activities would be the minor modification of incidental flights over upland areas rather than a modification of primary flight patterns. In as much as flights along these courses are not the rule but the exception and are generally goal-oriented movements between foraging or loafing areas . . . no impacts of waterbird use areas are expected to be associated with disruption of flight corridors.

This statement holds true for the situation at the "F" & "G" Street Marsh. Further, the lack of any buildings, trees, or other blockages between the bay and the marsh area further maintains this linkage. As has been noted, the proposed expansion of the wetlands between "F" & "G" Street Marsh and San Diego Bay (LCPR, Figure 1) will enhance the existing poor linkage between the marshlands and bay. It is noted that the enhancement of this linkage makes it even more critical that open access be provided under Marina Parkway in order to avoid roadkills of birds crossing between the marshlands.

Uplands surrounding the Marsh are extensively degraded and have little ecological linkage to marshlands. These areas do, however, serve as a spatial buffer between humans and the wetlands and, as such, their loss would result in a cumulative increase in the already substantial encroachment pressures on the system. This marsh would not benefit from the same building setbacks associated with the other marsh areas on site, however, the creation of additional wetlands on the site and the added upland fencing and buffer planting would

be expected to offset the adversities associated with the cumulative encroachment problems. For this reason, we consider this encroachment and isolation issues at the "F" & "G" Street Marsh to be cumulatively adverse, but not significant.

3.3.7.2 Suggested Designs and Measures

A considerable number of comments provided design suggestions for the proposed project; however, the comments did not address the LCPR No. 8 DEIR specifically. In some cases, these suggestions did not outline measures or features that would result in significant improvements over those already described in the DEIR or by the proposed project. Many of the suggestions had merit, and the positive nature of the suggested measures is acknowledged. Where design measures were recommended by commentors, an effort was made to develop a comment-based alternative which has been incorporated as Alternative #9 in the current document. This alternative has been analyzed under the same assessment criteria as applied to the project and all previously proposed alternatives. Note, however, that some suggested measures represent a level of benefit that is not required to offset the anticipated level of impacts. As such, these measures could not be justified as a requirement of the project to meet the requirements of CEQA. These features could, however, be of enhancement value above and beyond that required to compensate for project-associated impacts. Where this is the case, this has been noted.

3.3.8 Biological Issues Associated with Site Hydrology

Several commentors raised issues regarding the effects of various hydrologic modifications proposed within the bayfront. These issues related primarily to erosion, sedimentation and effects of the deteriorated quality of surface water on sensitive resources. In addition, there were concerns over the proposed project's altering of groundwater hydrology and the resulting impacts to wetland habitats.

3.3.8.1 Stormwater Drainage Directed to San Diego Bay

The proposed project would include two stormdrain discharges (one 24" and a twin 36") which would drain a 35 acre watershed and outlet directly to San Diego Bay at the top of the mudflat in sediments which are predominantly sandy in nature. Flows from these outlets would be dissipated at rip-rap protection aprons as described in USDA Soil Conservation Service design specifications. While both the applicant's hydrologic consultant, Rick Engineering Company (REC) and the environmental review consultant, Group Delta Consultants (GDC) have indicated that the rip-rap apron should effectively eliminate major erosion of the mudflats. However, it should be noted that even with the reduction of scouring below the stormdrain, some chemical contamination of mudflat sediments, and changes in soil salinity would occur along flowlines exposed at low tide from the fresh water flowing out of the storm drains. Further, gradual movement of finer sediment particles would eventually result in the creation of a delta area near the mean low tide limit. This would result in a reduction in eelgrass habitat.

In recognition of these concerns, two alternative approaches to mitigation of these impacts were considered in the recommendations of the DEIR. The first was to extend discharge

points beyond the mudflat to the deeper waters of the navigation channel. The pipes would be buried and would emerge at a depth of -10 to -14 feet MLLW within the channel. This plan would allow for some steeper drainage gradients and thus would assist in addressing some other drainage concerns as well (see response to comment B34). The effects of this program would be a guaranteed short-term construction impact which could be readily mitigated by restoring the mudflats to the pre-placement contours and replacing any eelgrass lost to the project. The restoration work would carry a monitoring requirement for a five-year period to confirm restoration and identify any corrective measures required to ensure success.

The second alternative and the one proposed by the applicant, takes an approach of mitigating any impacts in a retroactive manner. This proposal is to monitor the environmental parameters of the area around the discharges for a 3-5 year period to identify the extend of any effects after which, any impacts or losses would be compensated by taking corrective measures. A five-year period has been recommended by the National Marine Fisheries Service to ensure that adequate characterization of the site runoff and environmental conditions are experienced. The draw back to this is that the project is to be phased such that it could take many years to actually see any impacts resulting from the development of the discharge watershed and an extreme length of time could elapse prior to correcting any problems.

This second alternative is generally consistent with the requirements of special conditions of an active Section 404/Section 10 Permit (#88-267-RH) issued for the drainage improvements associated with the implementation of the City's existing certified LCP. Under special condition 10 of the permit, a plan detailing how monitoring of the mudflats is to be conducted including requirements to evaluate erosion, water quality and sediment degradation is to be completed. The plan is also to include any proposed corrective measures should impacts be identified. At this time, no such plan is available or has been provided to the resource agencies under the Corps permit process or to the environmental consultant. For this reason, it is not possible to evaluate the appropriateness of this plan at this time. This detail should be included in the project level analysis.

3.3.8.2 Governing Body for Predator Management Program

A multi-representative body was originally recommended to oversee the implementation of the predator management plan (Recommendation 17, pg. 3-112 of Volume II) to promote cooperative action between agencies so that multi-jurisdictional conflicts would not occur. The Bayfront Conservancy Trust (BCT) was recommended as that body because the BCT already existed (and a new entity would not need to be created), and because the BCT contains representatives from each of the interested parties and local jurisdictions. This recommendation has received considerable negative feedback from two opposing perspectives - those that want to be in charge, and those that don't. Unfortunately, if one or two agencies undertake the sole policy and management responsibility for the program, conflicting ordinances, governing policies and legal constraints will arise when representatives of these agencies wish to operate outside of their jurisdictions. As a compromise, it may be feasible that the management responsibility for implementing the program be given to a single entity, which is governed by the predator management plan and

a joint-powers agreement and which is responsible to a more broad-based, multi-jurisdictional policy-making committee for necessary revisions to these documents.

3.4 PUBLIC COMMENT RESPONSES

Specific responses to comments received on the August 1990 Draft EIR are presented in the following section.



Comment A

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

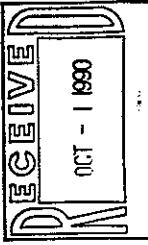
Southwest Region
300 S. Ferry Street
Terminal Island, California 90731

OCT 2 1990

Community Development Dept.

September 24, 1990 F/SNR13:RSH

Douglas Reid
Environmental Review Coordinator
City of Chula Vista
P.O. Box 1087
Chula Vista, California 92012



Dear Mr. Reid:

We have reviewed the Draft Environmental Impact Report (DEIR) for the City of Chula Vista Midbayfront LCP Resubmittal No. 8 Amendment. We offer the following comments for your consideration.

A1 The interest of the National Marine Fisheries Service in this project relates to potential impacts the proposed action may have on marine fishery resources. In particular, three elements of the overall project are of concern to our Agency.

The first is related to low-flow discharges to the Bay during the dry months of the year. We believe that these flows either should be intercepted and shunted to the municipal wastewater treatment facility or an on-site treatment facility should be required which has the capability of removing the usual array of pollutants that typify urban runoff. The proposed mitigation measures are unlikely to address this problem in an acceptable manner.

A2 The second concern is associated with the proposed two drains to San Diego Bay. We believe these drains should be constructed in a manner which ensures no significant impact from discharges to adjacent mudflats and eelgrass beds. This could be accomplished through the construction of oversized energy dissipators and flow diffusers as is partially addressed in the proposed mitigation section. However, we believe a monitoring program of at least five years is necessary in order to provide greater assurance that high rainfall periods will be included during the monitoring period. If impacts from these discharges are identified during monitoring activities, then immediate changes should be made in the design of the outfall structures such that further impacts do not occur. Preservation of existing habitat should be the primary goal rather than relying on mitigation in the form of habitat replacement at another site in the Bay.

A3 Finally, the last concern pertains to the proposed 10 acre salt water lagoon. The document does not contain sufficient information to evaluate this specific element of the overall project. While it appears the current concept envisions the pumping of on-site wells to supply the water needs of the lagoon,

Comment A - United States Department of Commerce

A1 Comment noted. Refer to General Responses 3.1.1 and 3.1.2. Comment is acknowledged regarding the possibility that nutrients (from fertilizers and detergents) may not be removed by the proposed oil/grease/sediment traps, and that these conditions can adversely affect water quality. See pg. 3-18 to 3-22 of Volume II for a listing of the water quality mitigation measures.

In addition, drought-resistant plants and xeric landscaping concepts will be used as much as possible for landscaping in order to reduce the use of fertilizers and irrigation water. Fertilizers, pesticides, and herbicides that are utilized within the landscaping areas of the project should be of the rapidly biodegradable type. All landscape chemical applications will be done by a State-certified landscape contractor.

A2 Comment noted. Refer to General Response 3.3.8.1. We would generally concur that preservation of habitat is preferable to replacement of habitat. However, we believe that the potential for ongoing long-term degradation of habitat from the proposed discharge points is a greater threat than a one-time disturbance that would be required to extend the drains into deeper water across the mudflat. Both options, the extension of the drains across the mudflat habitat or the discharge to mudflats, are considered likely to result in significant impacts. Consequently, the project team's preferred approach is to extend the drains (that would result in an initially greater but short-term effect to mudflat habitats), as opposed to a gradually increasing long-term impact with delayed and unspecified mitigation.

A3 Groundwater investigations performed to date indicate that pumping of on-site wells is a feasible source of lagoon makeup water. See General Responses 3.2.2.3 and 3.2.3.1.

In response to comments regarding build-up of saline conditions, see General Response 3.2.2.4.

In response to comment regarding probable need to periodically drain and clean the lagoon under present and anticipated regulations, it may never be possible to drain these lagoons for cleaning purposes. Cleaning must be done on a closed-system basis without liquid discharge to a receiving water body.

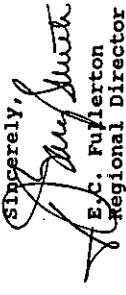


the feasibility of this option is uncertain. In addition, the gradual build up of hyper-saline conditions over time needs to be addressed as well as the probable need to periodically drain and clean the lagoon. The alternative water source (i.e., intake from the Bay) is unacceptable given the expected impacts associated with the construction of intake pipes and entrainment of marine organisms.

A4 In conclusion, we believe the DEIR does not provide sufficient details to ensure that those identified environmental impacts will be mitigated to a level of insignificance. We, therefore, believe that supplemental environmental impact report should be prepared which better addresses these issues.

If you have any questions regarding our comments, please contact Robert Hoffman of my staff at (213) 514-6663.

Sincerely,



E.C. Fuylemon
Regional Director

cc:
USFWS
EPA
CDFG

A4 See General Response 3.1.1.

Comment B

FISH AND WILDLIFE ENHANCEMENT
SOUTHERN CALIFORNIA FIELD STATION
Laguna Niguel Office
Federal Building, 24000 Avila Road
Laguna Niguel, California 92656

September 26, 1990

Douglas D. Reid
Environmental Review Coordinator
Planning Department
City of Chula Vista
P.O. Box 1087
Chula Vista, California 92012

Dear Mr. Reid:

The U.S. Fish and Wildlife Service (Service) has reviewed your draft Environmental Impact Report (EIR) Local Coastal Program Resources" for the proposed development of the Midbayfront, Chula Vista, California. The Service's review of these documents focused on the direct and secondary impacts of development of the Midbayfront would have on fish and wildlife resources and their associated habitats in Sweetwater National Wildlife Refuge (Sweetwater NWR) and San Diego Bay, both of which lie immediately adjacent to the subject property.

The Midbayfront covers approximately 135 acres. Chula Vista Investors, the project proponent of the development of the Midbayfront, is proposing to construct multi-family residential buildings, hotels, office buildings, retail shops, restaurants, conference center, cogeneration facility and athletic facilities including a tennis complex, swimming facility and an ice rink. Associated with this development would be a 10 acre salt water lagoon and areas set aside for public parks. This proposed development would consist of approximately 4.2 million square feet of building space. The draft EIR for the project stated this level of development is approximately 1.7 million square feet greater than the current allowable density under the existing certified LCP for the Midbayfront area.

Additionally, the height of many of the buildings in the proposed development exceeds the height allowed by the existing certified plan. The proposed development plan has buildings ranging in height from under 25 feet up to 265 feet. Specifically the development plan for the Midbayfront proposes two buildings reaching a height of 265 feet with an additional six buildings exceeding 100 feet in height. (The only recent change in this

proposed development plan that the Service is aware of is a commitment by Rohr Industries, Inc. to build a single building 44 feet in height in lieu of constructing three separate buildings having heights of 75 feet and 120 feet immediately east of the "F" and "G" Street Marsh. The LCP resubmittal sharply contrasts with the existing certified LCP where building heights would range between 25 and 70 feet.

Besides the Chula Vista Investors preferred plan, a no project plan and a development plan that conformed with the existing certified LCP, five alternative plans were presented in the draft EIR. Four of these alternative plans proposed reduced density of development and lowering of building heights. One alternative evaluated other locations where large scale development would occur.

Over the past two and a half months the Service has been meeting with a variety of biological consultants hired by Chula Vista Investors in an attempt to resolve outstanding concerns raised by the Service in our July 21, 1989, letter of comment on the Notice of Preparation for the draft EIR. Major subjects specifically "F" and "G" Street Marsh by the proposed development, the potential use of tall buildings by avian predators of the endangered California least tern (tern) and light-footed clapper rail (clapper rail), the expected increase in tern and clapper rail predation by mammals associated with the Midbayfront development, and potential for avian collisions with the proposed buildings located adjacent to San Diego Bay and Sweetwater Marsh. Discussions between the applicant and the Service have been extremely helpful in exploring means whereby these issues can be resolved. However the details surrounding the resolution of any specific issue have not been reached. Significant issues associated with Chula Vista Investors proposed development of the Midbayfront as shown in Figure 2-IV of the draft EIR are identified below under separate headings.

Isolation of "F" and "G" Street Marsh

- B1** Proposed development of the area calls for construction of a 44 foot high Rohr Industries building immediately east of the marsh facility just north of "F" Street. To the immediate south side of the marsh is the existing Rohr Building "61" which is approximately 73 feet in height. The construction of these new buildings create additional potential avian predator perches. The proposed development would also increase pedestrian and vehicular traffic along "F" Street and Marina Parkway. The reduction of visual openness to the north and east of the "F" and "G" Street Marsh along with the present restricted view to the south coupled with new avian predator perches and increased foot and vehicle traffic would significantly reduce the biological value of the marsh for shorebirds and marsh and wading birds. The development would also substantially reduce the likelihood of

Comment B - Fish and Wildlife Enhancement Southern California Field Station

- B1** See General Response 3.3.7.1 and 3.3.3.1 - 3.3.3.2. In addition, it should be noted that the DEIR analyzes the impacts of the LCPR No. 8 document and only those features proposed and referenced in that document were utilized in preparing our analysis. The impacts identified by the commentor and the proposed enhancement project, resulted in recommendation 19 found on pg. 3-114 in Volume II.

re-establishing nesting pairs of the endangered clapper rail, a species that formerly was present in this marsh system. The expansion of clapper rails into formerly occupied habitat is a major goal of the Service in recovering this species.

In an effort to compensate for the above adverse impacts, the Service discussed with David Smith, a consultant for Chula Vista Investors, the potential for creating additional marsh habitat. The marsh and coastal sage scrub restoration and enhancement concept plan discussed to date is summarized in Table 3, page II-102 and is illustrated in Figure 11, Page II-106 of ICP Resubmittal Specific Plan. Unfortunately this information was not discussed in the draft EIR document.

B2 It is our opinion, that the proposed creation of 3.7 acres of freshwater marsh and 4.0 acres of salt marsh along with the enhancement of an additional 0.5 acres of salt marsh falls short of adequately compensating for the proposed impacts. We recommend that two additional compensation measures be incorporated into the project. One major feature is the placement of Marina Parkway on pilings where it crosses "F" and "G" Street Marsh. This is an extremely important feature since "openness" of the marsh would be significantly reduced all directions but to the west as a result of building placement. Another important reason for the use of pilings is the proposed width of Marina Parkway. The proposed minimum width of this six-lane road is 104 feet. The maximum width would be 120 feet. Given the proposed width of the road, culverts (unless extremely large) would be inappropriate for the movement of wildlife between the existing "F" and "G" Street Marsh and what is proposed to be created west of Marina Parkway. Pilings, when compared to culverts, are better biologically because these structures allow a greater area to be covered by tidal waters, permit sunlight to cover a greater percentage of mudflat area, and provides wildlife a direct line of sight and visual openness needed by marsh and wading birds and the clapper rail in their movements through a marsh.

B3 A second major feature would be the extension of "F" and "G" Street Marsh to the north and Sweetwater Marsh to the south. The purpose would be to create a band of additional salt marsh habitat that would provide a wildlife movement corridor between the two existing marsh areas. The minimum width of wetland habitat band should be 200 feet. The recommended location of this band is shown in Figure 1.

Increased Predation of Federal and State Listed Endangered Species

B4 The development of the Midbayfront will likely lead to increased predation levels of federally listed endangered species including the tern and the clapper rail. Increased predation levels may also occur to Belding's savannah sparrow, a State listed endangered species. Tall buildings will provide potential perch

B2 See General Response 3.3.7.1 - 3.3.7.2 and recommendation 19, pg. 3-114 of Volume II. We concur that pilings are the most preferable approach to bridging the mouth of the "F" & "G" Street Marsh connector channel. We would further agree that the three 48" RCP pipes proposed to make this connection are inadequate. However, half-round corrugated culverts of 10 feet or more in radius discussed in the EIR are frequently used as an economical way of creating large wildlife crossings and floodways under roadways where bridging is prohibitive expensive. As discussed in the DEIR text, it is essential to ensure adequate dry land under any crossing type. Finally, the DEIR, Volume I, Section 5.0 discusses a new Alternative 9 that was evaluated in response to public comment.

B3 See General Response 3.3.7.1 - 3.3.7.2. Again we concur that linkage of these wetland areas would be of benefit. This option has been explored in the newly added Alternative 9 which has been developed to respond to a variety of issues raised during the DEIR public review period. See DEIR analysis of this alternative (Volume I, Section 5.0).

B4 Comment noted. Background information on these issues is found in Section 3.7 (Pages 3-91 through 3-97) and Appendix C and was used in the analysis of proposed project and alternative project impacts.

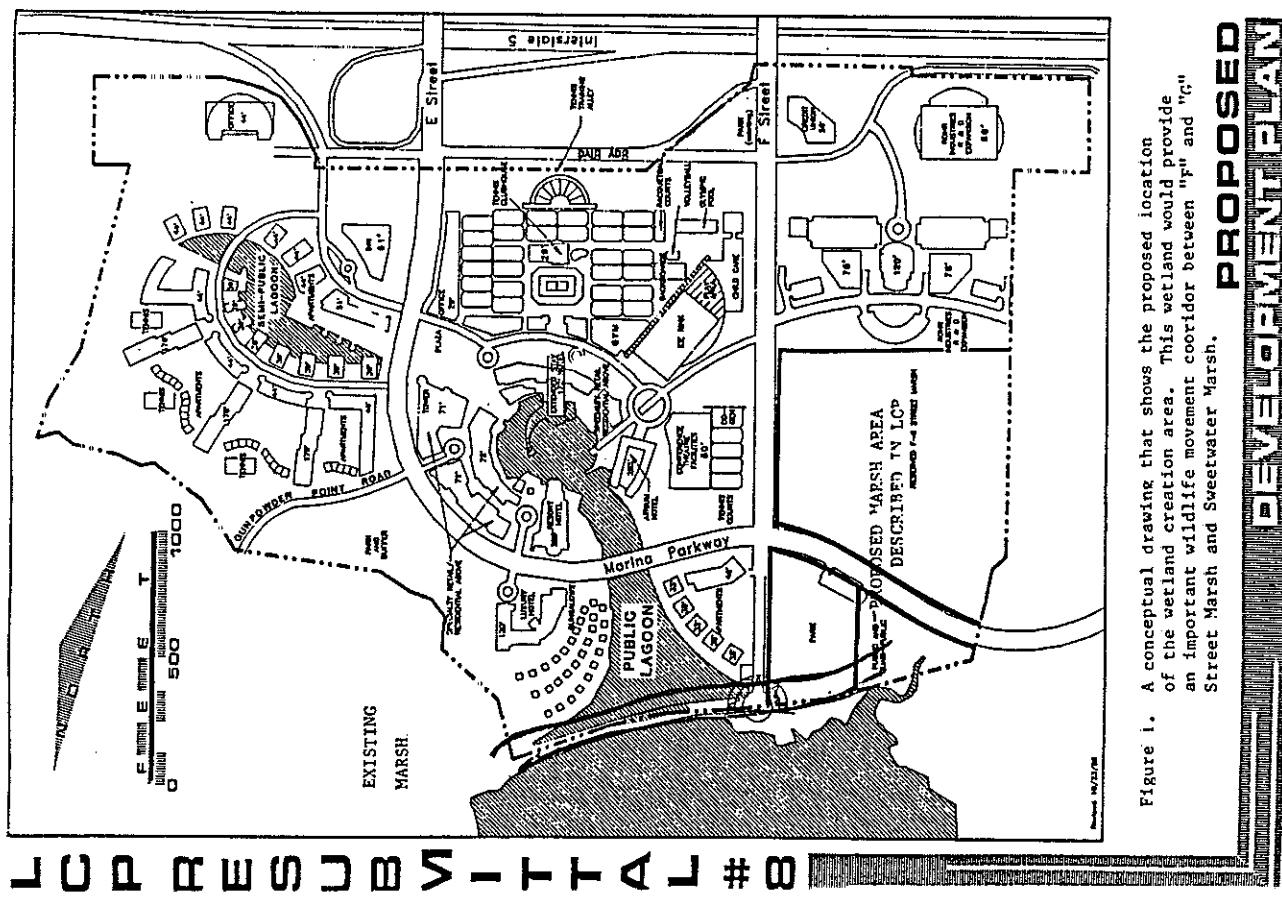


Figure 1. A conceptual drawing that shows the proposed location of the wetland creation area. This wetland would provide an important wildlife movement corridor between "F" and "G" Street Marsh and Sweetwater Marsh.

sites for raptors such as peregrine falcons, American kestrels and red-tailed hawks. Each of these bird species has been documented to prey on terns. While red-tailed hawks have been the only avian predator actually observed killing a clapper rail, it is likely that peregrine falcons will take an occasional clapper rail and American kestrels will prey on clapper rail chicks. These raptors could use the height of the building as a vantage point to observe clapper rail movements in Sweetwater Marsh or tern flight activities associated with their nesting colony located on "D" Street Fill. Buildings generally 70 feet or higher provide effective predator perches for bird species such as the peregrine falcon (Bloom pers. comm.). Planned buildings of particular concern to the Service are the three apartment towers located north of "E" Street that are 176 feet in height and four hotels located in the central portion of the Midbay front. Two of the hotels are proposed to have heights of 265 feet while the remaining two hotels are proposed to be 120 feet and 172 feet in height. The use of buildings by avian predators has been clearly demonstrated during 1989 and 1990 at the North Island Air Station tern colony located in northern San Diego Bay. In 1989 an American kestrel was observed perched on a cable located on top of a building. The cable was 112 feet 8 inches above the ground. Linda Belluomini, a tern monitor, observed the kestrel make a direct and unwavering flight from the cable to the tern colony where the kestrel took a tern chick. Clark Winchell, a Navy biologist, determined the distance from the cable to the tern nesting colony was 2560 feet. On a separate date in 1989, Elizabeth Copper, a consultant to California Department of Fish and Game, observed a kestrel flying from the same cable and actively hunting over the tern colony.

In 1990, kestrels and an American peregrine falcon were observed actively hunting over the North Island tern colony. The peregrine falcon was observed perching on a computer building located 1600 feet from the colony. The height of this building is 66 feet. Shortly after the arrival of these raptor species at the end of May, the adult terns abandoned their nesting colony until mid-June. This resulted in 11 active nests being abandoned, several which were close hatching (Copper pers. comm.).

Additional instances of predation undoubtedly occurred at North Island. However, actual personal observations of predator/prey interactions are limited given tern monitors at Navy bases like North Island only spend a few hours three to five times a week making visits to the tern colony. Nevertheless, based on regular weekly counts of actual tern numbers, it was determined that greater than 50% of the tern chicks were killed by avian predators (Copper, pers. comm.). Losses of tern chicks to other causes such as mammalian predators was determined to be minimal at this site as a result of a high chain link fence that surrounds the tern colony and regular trapping efforts conducted by predator management personnel.

- B5** Based upon the above information, the three 176 foot apartment buildings which are located approximately 2500 to 3000 feet away from where terns have traditionally nested on the "D" Street fill are well within the documented hunting range of kestrels. These buildings would also be used as perch sites for the peregrine falcon known to have a larger feeding territory than kestrels.
- B6** Clapper rails would be most vulnerable to predation by raptors using perches on the buildings during high tide events. During high tides clapper rails move to high marsh areas or upland sites that have no or limited marsh vegetation that can be used for cover. It is during these times that adult rails and their young are most easily observed and therefore subject to increased avian predation. Tall buildings such as the three apartment buildings (i.e. 176 feet each), the luxury hotel (i.e. 120 feet), and the resort hotel (i.e. 265 feet) are to be constructed less than 1000 feet from the edge of the marsh. The Atrium Hotel which is 265 feet in height could only be slightly more than 1000 feet from the marsh. These buildings given their close association to the existing marsh would likely facilitate significant increases in clapper rail predation.
- We are greatly concerned with this problem because even with an effective predator management program there are no guarantees that a raptor known to be harassing or killing endangered species can be captured. For example, efforts to capture the peregrine seen harassing the North Island tern colony in 1990 resulted in failure because the peregrine could not be located once a team of appropriate trapping experts were assembled.
- B7** Another problem associated with the capture of raptors is once they have been caught in a trap these bird species become extremely wary of future trapping efforts. The inability to capture just one raptor that is killing terns or repeatedly harassing the tern nesting area ultimately leads to the abandonment of the tern colony. Often if terns are harassed by predators for two to three years in a row and have poor nesting success they will abandon the colony site altogether for several years.
- B8** Two other problems are associated with the control of raptors. Avian predators removed and released at distant locations have been known to return. In 1988 a kestrel was trapped and removed from Bolsa Chica Ecological Reserve, banded, and released near the town of Banning by the California Department of Fish and Game, a distance of approximately 65 miles and over two mountain ranges. This individual returned a few days later. Secondly, the removal of avian predators may allow other individuals of the same species to occupy the former's territory. This has also been noted with kestrels at Bolsa Chica.
- B9** The tern colony at "D" Street is a significant one. During the mid-1970's this colony consistently accounted for 30% of the tern

B5 Comment noted. See pp. 3-91 to 3-97 also see General Response 3.3.3 - 3.3.3.3.
 B6 Comment noted. See pp. 3-91 to 3-97. Also see CVTs proposed "Design Requirements," available at the City of Chula Vista which provides conceptual plan guidelines for the development of a Predator Management Program. One aspect considered to be of extreme importance is the provision of full-time predator management staff.

B7 Comment noted see DEIR pp. 3-91 to 3-97.
 B8 Comment noted see DEIR pp. 3-91 to 3-97.
 B9 Comment noted.

- B10 Young produced in San Diego County. In 1976 it accounted for approximately 82% of all young produced in the county.
- B10** Protection of clapper rail nesting and foraging habitat is also extremely significant. Sweetwater Marsh is only one of eight marshes in the state where this species is known. Numbers of individual clapper rails in California are extremely low as only 163 pairs are known. Only five pair were documented in Sweetwater Marsh in 1989. The loss of only a few individuals could lead to the elimination of a viable breeding population from this marsh.
- B11** Based on the above concerns and our review of the proposed projects likely effects, we recommend that buildings in excess of 70 feet moved to the east and reduced in height. We recommend the three apartment buildings be moved southeast of the "semi-public" lagoon, and the hotels be relocated between the eastern end of the public lagoon and Bay Boulevard. The relocation and reduction in building height would provide the greatest benefit given the inherent problems associated with successful predator management efforts. After adequate consideration has been given in the relocation and reduction of height in buildings, design criteria should be developed for these structures to discourage raptor nesting or perching. Only after these considerations have been carefully integrated into a least damaging development plan should the incorporation of predator management be considered. These measures would ensure that buildings will not be a constant source of avian predation.
- B12** Buildings are not the only structures that raptors will likely utilize as perch sites. Tall trees, street lamps, and fences are also frequently used as perch sites. Of particular concern to the Service is that these structures may be placed adjacent to the edge of the marsh. Pacific Southwest Biological Services, Inc. documented the presence of large numbers of Belding's savannah sparrow nesting territories in the high coastal salt marsh habitat immediately adjacent to the proposed Midbayfront development area. The locations of the nesting territories is shown in Figure 11. "Approximate Distribution of Belding's savannah Sparrow Nesting Territories" contained within the "Avian Flight Evaluation" of Appendix C. The Belding's savannah sparrow is a State listed endangered species and a Federal category 2 candidate species. To provide protection of nesting habitat adjacent to the Midbayfront the following measures should be implemented: 1) trees should be excluded from the parklands adjacent to Sweetwater and "F" and "G" Street Marshes, 2) street lamps and the proposed fence that would be erected between Sweetwater Marsh NWR and the proposed Midbayfront development should be designed so they will not be used by raptors for perch sites.
- B13** Mammalian predators will also increase with the development of the Midbayfront. The most serious of these predators will be dogs and cats. Cats are a documented predator of the clapper
- B10 Comment noted. The tenuous status of this species and this population has been considered in the analyses. See Volume II pg. 3-104.
- B11** Comment noted. Alternative 8 addresses design standards to discourage raptor nesting or perching and a predator management program. This information was submitted by the applicant after the publication of the DEIR. The applicant's redesign, however, does not appear to respond to comments regarding building placements and heights.
- In order to respond to these redesign issues, the project team has developed and evaluated a new alternative in the DEIR. This alternative is termed Alternative 9 in this document and is addressed in Section 5.0 of Volume I. Alternative 9 has reduced the building heights to a maximum of 12 stories (132 feet). Two of the hotels have been moved east of the public lagoon, while one hotel remains east of Marina Parkway. This alternative would incorporate the design standards that have been proposed by CVI's proposed "Design Requirements." The alternative also has expanded the semi-public lagoon and relocated buildings to the south and east of this lagoon.
- Finally, it is recognized that details regarding the project design and predator management program will not be finalized at this plan-level EIR. Consequently, additional studies and analyses will be conducted during the project-level of CEQA compliance. At that time, the impact significance and specific mitigation measures for these issues will be further identified.
- B12** Comment noted. See General Response 3.3.3 - 3.3.3.3. It should be noted that Figure 11 of Appendix C indicates multiple observation days during which a maximum of 18 singing males were observed within the study area. This is not to discount the importance of this birds presence in area, but to clarify some prior misinterpretation of the figure. Figure 11 has been modified to more clearly define the various territories and is included in Volume II.
- B13** Comment noted. See Volume II pp. 3-88 to 3-91 and Mitigation Requirements #11-18. Also see General Response 3.3.3.4.

rail. Feral cats have also predated numerous tern colonies. They primarily kill young tern chicks before they have learned to fly although they have been observed to take adult terns and tern eggs (Copper pers. comm.). Other mammalian predators of the tern include skunks, opossum, raccoons and rats. These animals are expected to be attracted to the development by garbage and by residents who will purposely leave food out to feed animals such as raccoons.

B14 To minimize the take of endangered species by mammals, the Service recommends the following establishment of an effective mammalian predator management program; stipulated conditions, covenants, and restrictions to preclude future residents of the Midbay front from owning dogs or cats; prohibiting dogs from using proposed park lands within the Midbay front and strictly regulating the control of garbage by making sure all refuse is kept in covered containers at all times and imposing substantial penalties on violators.

Potential for Peregrine Falcons to Nest on the Tops of the Tall Buildings

B15 Buildings, particularly those which exceed 70 feet in height, have the potential to be used as nest sites for peregrine falcons. A primary criteria for building design should be to make all structures unsuitable for raptor nesting. Chula Vista Investors has made a commitment to the Service to develop specific building criteria to preclude raptor nesting on structures.

Potential Bird Collisions with Proposed Buildings or Man-Made Structures

The Service believes there is potential for buildings or other man-made structures (i.e. T.V./radio towers, antennas, powerlines, beacons, etc.) to be struck by migratory birds resulting in their death or injury. One annual estimate of avian mortality resulting from strikes from the United States alone (Banks 1979). Klem, Jr. (1990) estimated the avian death toll from collisions with windows was a much more serious problem resulting in 98 to 976 million birds being killed annually. Multistory buildings were found to be the largest cause of mortalities.

Many reported cases of birds colliding with structures has occurred during periods of heavy fog or overcast nights with low ceiling visibility. However, this is not always the case. There have been reported instances of bird strikes with man-made objects during non-overcast nights.

While songbirds have been the most frequently recorded group to be involved with window collisions, wetland bird species such as grebes, herons, egrets, rails (i.e. Virginia, sora and black) and ducks have been documented to strike windows (Stout and Cornwell

B14 We strongly concur. See mitigation requirements #11-18. Also see General Response 3.3.3 - 3.3.3.4.
B15 Comment noted. See General Response 3.3.3 - 3.3.3.3. It should be noted however, that 70 feet in height is not a hard break between habitat suitable for Peregrine Falcon nesting and habitat that is unsuitable. Many factors are important to nest site selection.

B16 See General Response 3.3.1 - 3.3.1.2 and DEIR Appendix C, Section II. While we concur that collisions may be important in the losses of avian species in certain circumstances, it should be noted that shorebirds and waterbirds are generally less susceptible to collisions than are passerine families.

As has been stated in the comment, collisions with windows on multi-story buildings are frequently associated with avian mortality. However, it should be noted that overall such collisions are far less important than collisions with such features as powerlines, fences, and tower guy-wires. Further, as noted, most strikes of structures are associated with passerine collisions along the eastern and central flyways. Collisions along the west coast generally have an extremely low level of incidence.

The USFWS has suggested that minimal reports of actual building collisions may be a result of few buildings being constructed near wetland areas. The project team biologists, PBS, do not agree with this assumption. Unquestionably there are fewer buildings built with the immediate vicinity of marshlands, perhaps for the simple reason that there are not many marshlands. However, it should be noted that almost all of our information regarding the behavior of waterbirds is drawn from observations specifically made at structures not only near, but often times directly located within, wetland habitats. These include powerplant cooling towers as well as transmission towers. There is almost no information short of incidental accounts of building collisions by waterbirds or raptors outside of these areas. Even with the encroachment of such prominent structures as transmission towers into wetlands, these are almost never struck by birds and the adjacent lines are almost the exclusive cause of collision mortality. It is from these sites that the collision rates discussed in the General Response 3.3.1 - 3.3.1.2 are drawn. See also discussions within the literature review included in the flight study report (Flight Study section of Appendix C).

We concur that one of the primary concerns is with shorebirds, marshbirds and wadingbirds. This concern is one of the primary reasons that the flight studies in the bayfront focussed on the waterbirds including shorebirds, marshbirds and wading birds. In addition, the study encompassed waterfowl, aerial fish foragers, and raptors.

(1976) as cited in Allen and Ramirez (1990) reported that dabbling ducks seem more likely to be involved in collisions with fences and buildings than diving ducks. Dabbling ducks that utilize Sweetwater Marsh include green-winged teal, blue-winged teal, cinnamon teal, mallard, northern pintail, northern shoveler, gadwall and American wigeon. Researchers believe that man-made objects may be most hazardous for young-of-the-year, migrant or nomadic birds.

Minimum reports of shore, wading and marsh birds striking windows are probably largely due to the fact that large buildings are only rarely built within 1000 feet from a coastal salt marsh and therefore the probability of shorebird strikes are overall very low.

Of primary concern to the Service is the large numbers of shore, marsh, and wading birds which have been documented to use south San Diego Bay. With respect to shorebirds, Jehl, Jr. and Craig stated in their "San Diego Shorebird Study 1969-1970" that south San Diego Bay was unquestionably one of the major wintering grounds and migratory shorebird feeding and resting points on the California coast.

B17 The avian flight study (Appendix C), Table 3, "Summary of Avian Flight Activities Within Areas of Potential Flight Pattern Interference" shows that the proposed project would adversely affect flight patterns of small and large shorebirds (minus killdeers) by 1.2%, wading/marsh birds by 5.4%, aerial fish/foragers by 4.2%, brown pelicans by 2.5% and waterfowl by 0.9%. Given the number of waterbirds that utilize the intertidal mudflats to the Midbayfront and the high frequency at which these species were observed to fly under 50 feet, the Service believes tall buildings constructed adjacent to Sweetwater Marsh and San Diego Bay may result in significant bird mortalities due to collisions.

B18 The 120 foot high Luxury Hotel appears to pose the greatest potential impact to avian flight paths. Figure 24, "Flight Patterns By Guild" of the avian flight study contained in Appendix C -- Biological Resources Midbayfront shows that wading and marsh birds fly over upland areas adjacent to the San Diego shoreline. One such upland is where the proposed Luxury Hotel would be built. Based upon the potential for project related bird mortalities, we recommend that this hotel be relocated east of the proposed Marina Parkway. Relocating of this hotel would be a significant improvement from the Service's standpoint.

B19 In addition, non-reflective glass should be utilized for all buildings proposed to be constructed in the Midbayfront. Other considerations to prevent bird collisions with glass are described by Daniel Klem, Jr. in his 1979 Ph.D. dissertation, "Biology of Collisions Between Birds and Windows." The Service has a copy of this thesis. We recommend that the consultants for Chula Vista Investors review the document and determine what

B17 Refer to General Responses 3.3.1 - 3.3.12.

B18 Refer to General Responses 3.3.1 - 3.3.12. See also General Response 3.3.7.2. See also Volume II pp. 3-85 to 3-88 and the Flight Study section of Appendix C. Relative to predation threats associated with this structure see General Response 3.3.3 - 3.3.3.3 and Volume II pp. 3-92 through 3-94.

B19 Comment noted. See General Response 3.3.12 and Mitigation Requirement #21 on pg. 3-114 of Volume II. Non-reflective glass has been recommended by the EIR consultant for all buildings. Since the circulation of the DEIR, additional design specifications have been provided in CVI's proposed "Design Requirements." One recommended change to these design standards is to incorporate non-reflective glass into all east-facing windows which occur above the 2nd story of any building to avoid creating the illusion of water for any birds flying west during early morning hours.

design criteria can be incorporated into the proposed building design to prevent this significant problem.

B20 The Service also recommends that conventional T.V./radio towers, antennas, powerlines, beacons, and guide wires to hold man-made structures be banned from the Midbayfront Planning Area. These structures along with buildings are the most frequently reported man-made objects to be struck by birds.

Effects of Lighting on Birds

B21 The effects of lighting on birds were not addressed to any degree in the draft EIR or Appendix C -- Biological Resources Midbayfront. The Service has two concerns regarding this issue. What would be the effects to the Sweetwater Marsh and the bird species that utilize this area from all light sources (i.e. street lights, lights originating from hotels, offices and residences, security lighting, lighting associated with proposed tennis courts, etc.) associated with the proposed Midbayfront development and how might those effects be mitigated? We recommend that an analysis be performed to provide an estimate of where and what amount of adjacent intertidal mudflats and coastal salt marsh would be subject to increased levels of luminescence. Based on this analysis, predictions should be made on how wetland areas receiving increased levels of luminescence would also be shore, marsh and wading birds. A discussion should also be provided concerning predation levels of avian species by owls and black-crowned night heron in areas receiving higher levels of luminescence.

B22 Our second concern focuses on means which can be incorporated into the design criteria for lights used in the Midbayfront development to prevent bird mortalities.

Biological researchers have found some bird species become disoriented from lights coming from windows, floodlights, and searchlights. It is believed that birds can confuse a prominent light source with stars or other celestial objects that they use for navigational purposes. Attraction of birds to light sources in some cases resulted in collisions with buildings, towers, or other man-made structures.

Ceilometers (searchlights) and floodlights are the most reported light sources associated with bird mortalities. The Service recommends ceilometers be banned from use within the Midbayfront planning area. Exterior lighting should be shielded to prevent all upward reduction of light.

Klem, Jr. (1979) reported instances of birds crashing into lighted windows. Giller (1960) Raile (1968) and Schmitz (1969) as cited in Klem, Jr. (1979) found that nocturnal strikes are entirely eliminated by turning off lights near or behind windows or by keeping interior lights from to the outside (curtains, draperies).

B20 Comment noted. Applicant proposed design guidelines have precluded these features (see biological resource mitigation measures in Volume II pp. 3-110 to 3-115). The measures incorporated for the purpose of predator perch reduction would also help to minimize avian collisions by removing additional protruding building features. It should be noted that on a national level, transmission line bird collisions far and away out-number collisions with all other man-made structures. See also General Response 3.3.1.1.

B21 See General Response 3.3.2.1.

B22 See General Response 3.3.2.1.

Based upon such an analysis specific design criteria for interior and exterior lights associated with the development should be developed.

Compensation for Raptor Habitat Destroyed With Development of the Midbayfront

B23 While new perching opportunities would allow some raptors to target endangered species, the area is currently widely used by many raptor species without such adverse consequences due to an absence of natural perches.

Numerous raptor species were documented to use the Midbayfront for wintering raptors based on the high diversity and numbers observed utilizing this area, the Service believes development of this area would have a significant adverse affect to raptors. Compensation to offset this loss is needed. The Service has recommended to the biological consultants hired by Chula Vista Investors to identify other upland areas adjacent to coast marsh habitat in San Diego Bay or the Tijuana River Valley that could be set aside and managed as raptor habitat. A list of alternative compensation sites, the number of acres of each site, and the current landowner should be prepared and included in the final EIR.

Potential Conflicts With Human Activity in Proposed Parklands and Bird Species that Utilize Wetland Habitat

B24 Section II "Land Use Plan", Page 40 of the Local Coastal Program Resubmittal Specific Plan shows a conceptual plan for wetland buffer/parkland interface. Section II, page 126, illustrates a "Pedestrian/Bicycle Circulation" pathway within the Midbayfront planning area. The Service is concerned with the width of the buffers proposed adjacent to Sweetwater Marsh and the lack of any apparent buffers adjacent to San Diego Bay. Human activity in close proximity to nesting and foraging wetland bird species can be significantly disruptive. White (1986) investigated the effects of human disturbance on the Belding's savannah sparrow. Similar disruptions of shorebirds can be expected from human activities along the intertidal mudflats located directly in front of the 10 acre public lagoon and the proposed park area located south of the lagoon.

Large numbers of this State endangered bird are found in the marsh and upland transitional zones adjacent to "E" Street Marsh, Vener Pond and Sweetwater Marsh. Belding's savannah sparrows nest in salt marsh vegetation ranging characteristically middle

B23 Comment noted. See General Responses 3.3.4.2 and 3.3.7.2.

B24 See General Responses 3.3.6.3 and 3.3.7.2. The proposed buffering as shown on page II-40 of the LCPR No. 8 would provide a 150 foot wide buffer between the marshlands and the first public use areas, which is a passive use trail system. This buffering is believed to be suitable for the trail. Major concerns have, however, been raised about wandering individuals and the effects of uncontrolled access to off-trail areas. For this reason, fencing and a vegetated berm were incorporated into the buffer plan to provide both physical and visual buffers to the refuge. The general design of these buffers has been provided by the applicant as a landscape design standard (CVI's proposed "Design Requirements"). This buffering concept design has been further revised and incorporated into the DEIR as a biological mitigation measure. With these features, a public awareness campaign and proper enforcement (to be developed in accordance with Section IV: Control of Human Activity of CVI's proposed "Design Requirements" and subject to project level environmental review), it is expected that human access to sensitive marshlands may be adequately controlled.

With the buffers and buffer features in place, and compensation for degradation effects of predation and "residual" human disturbance effects at the fringing marsh areas (Volume II mitigation measure 26, pg. 3-115), Belding's Savannah Sparrows would not be considered to be significantly impacted by the proposed project. With both a visual barrier to fringing wetlands and a distance barrier to shoreline territories, these birds are not expected to be affected by use of the trail system. As noted by the Service, White (1986) reported flushing of birds primarily at distances of 20-40m (65-130ft) when approached in their habitat (i.e., low growing coastal saltmarsh). The proposed project buffering adjacent to marshland habitats of this species provides for a 100+ ft. horizontal buffer as well as a berm and shrub cover visual buffer. This arrangement would provide extensive shielding of human form at proximate shoreline fringes, while allowing for a much greater spatial buffer between users of the active park and birds in more distant portions of the marshes.

We concur that more buffering is better and we would also recommend the incorporation of water features as buffers as well (see Alternative 9, DEIR, Volume I, Section 5.0). Such buffers would radically reduce the intrusion into the adjacent wetland areas by rodents, domestic cats, dogs, and humans while providing an additional perceived threat and encroachment barrier. These could include such opportunities as expansion of tidal channels or creation of small groundwater-fed ponds within buffer areas; however, these could only be readily constructed in low lying areas near the western end of the proposed 10-acre lagoon, "E" Street Marsh, and Vener Pond. To most appropriately develop these water barriers, it may be required to have a similar coordinated effort on adjacent refuge buffer lands. On higher ground, water barriers would require lining and more sophisticated construction procedures. These measures are, however, not believed to be requisite to adequately avoid and mitigate impacts to this species.

marsh (i.e. Salicornia virginica) to high marsh (i.e. Nonanthonochloa littoralis, Distichlis spicata). This bird species also utilizes the adjacent upland transition habitat for foraging (White 1986).

White (1986) documented that this bird species would flush at distances from over 100 meters (328 feet) to less than 5 meters due to the disturbance of a person walking through an area. Most birds were documented to flush between 20 and 40 meters from the disturbance. It was also observed that an individual bird closer to the disturbance may influence birds farther away by causing them to flush in a chain reaction. The draft EIR for the proposed project states that the Midbayfront residential and commercial development would result in a human population of approximately 3,007 individuals living and working in the area. Additionally there will be an unknown quantity of people from San Diego, Chula Vista, National City, Imperial Beach, etc. coming to Midbayfront to use the park areas adjacent to the marsh.

With the overall projected increase in numbers of people and the unprecedented construction of buildings adjacent to a National Wildlife Refuge, we believe there should be a minimum 200 foot buffer between the edge of the wetland habitat and upland areas designated for Park uses. We recommend that the proposed fence shown in Section II, Page 40 be relocated 50 feet to the east and that the proposed public path be started 200 feet from the edge of the wetlands. The 200 foot upland areas should be planted with coastal sage scrub habitat in those areas where such habitat has been degraded, disturbed or currently does not exist.

The buffer area adjacent to the intertidal mudflats of San Diego Bay could be the proposed wetlands creation area (Figure 1) being proposed by the Service. A low barrier fence would need to be installed on the upland habitat adjacent to the newly created marsh in order to control people and mammals from entering this habitat. Without the creation of this additional marsh habitat and a fence to control access a bicycle path along the edge of San Diego Bay mudflats would present an unwarranted level of impact.

Groundwater Pumping to Fill Proposed Midbayfront Lagoons

B25 The Midbayfront plan proposes two lagoons. The largest lagoon is identified as 10 acres in extent while the smaller lagoon is proposed to be approximately 2.6 acres in extent. It was identified in the draft EIR that the lagoons would be filled with brackish water pumped from an unspecified number of wells. The location of the proposed wells is also unknown.

B26 It is important that we know what effect groundwater pumping would have on the coastal sage scrub, coastal salt marsh and freshwater marsh vegetation found within the proposed Midbayfront planning area and Sweetwater Marsh NWR. An analysis should be conducted to address 1) how far the existing groundwater table

B25

Refer to General Response 3.2.3.1. Approximate location of well field, as proposed by GEOCON Environmental Consultants (GEC), is shown on the figure in Section II/A/1.1, which is available for public review at the City of Chula Vista. The final location and placement of wells along the San Diego Bay will be determined by the installation and testing of each well, one at a time, to estimate the actual number of wells required for the project. The final well siting will be addressed further in the project-level EIR.

B26 See General Response 3.2.3.5.

would drop at each well site, 2) the size and location of the cone of depression created by such pumping, 3) amount of groundwater needed to be pumped to initially fill the lagoons and keep them at full capacity throughout the life of the project, 4) the projected amount and location of salt water intrusion that would occur where the existing groundwater table is being drawn down, and 5) projected losses of marsh or coastal sage scrub vegetation or effects on seedling germination and plant growth resulting from the proposed action.

B27 A separate concern associated with groundwater pumping is the presence of hazardous substances in the groundwater. Section 3 "Environmental Impact Analysis", page 19 of the draft EIR identifies that chlorinated hydrocarbons were found in all groundwater monitoring wells and trichloroethene (TCE) was found in 4 of 9 wells near the Rohr Industries site located near southeast corner of the Chula Vista Midbayfront Project. An analysis of the presence and concentration level of contaminants should be performed at all proposed well locations.

B28 Direct pumping of San Diego Bay was an alternative method of filling the lagoons with seawater. It was briefly discussed in the draft EIR. If this method were employed the Service would be concerned with the impingement/entrainment of aquatic organisms on the intake structure. An appropriately sized screen and low intake velocity would need to be an integral part of any intake facility placed in San Diego Bay waters to avoid impacts to marine organisms.

Details Needed Surrounding the Employment and Maintenance of Sediment and Oil and Grease Traps

B29 It was stated throughout the draft EIR document that sediment and oil and grease traps would be employed as part of the proposed Midbayfront development. However, the details concerning the number of traps, where they would be located, how often they would be cleaned and their operational effectiveness was not discussed. The Service would like this issue addressed in detail to provide needed assurance that sediment and toxic contaminants would not be discharged into Sweetwater Marsh NWR or San Diego Bay.

B30 It is our understanding that increased street cleaning can have a beneficial affect in reducing the amount of pollutants that would enter San Diego Bay and the adjacent marsh areas. For this to be an effective program there needs to be clarification of how often streets would be cleaned and how this would vary from existing street cleaning practices.

We additionally recommend the development of an erosion control plan that could be implemented at all construction sites within the Midbayfront. This plan should specify specific erosion control measures that all contractors would be responsible for implementing with any development within the Midbayfront.

B27 Refer to General Response 3.2.3.1.

B28 Comment noted. Direct pumping of seawater to provide replacement water in the lagoon would be an extremely appropriate approach to providing an adequate water supply to the lagoon systems. Further, this approach would do away with considerable uncertainty associated with a groundwater pumping program. The drawbacks to this approach are additional permitting requirements, increased system maintenance, pipeline placement impacts, and potential issues of fish entrainment. These issues are readily addressed through construction and design factors including shallow intake line placement, and use of appropriately sized screens and piping. Maintenance requirements are increased by the continual growth of fouling organisms on the interiors of the pipes or on intake cage screens. Backflushing pipes with hot water is generally successful in keeping lines clear.

B29 Refer to General Responses 3.2.1.1 and 3.2.1.2. Refer to Letter Response A.1. A schematic of the traps, and a map showing the proposed locations of the five outfalls and associated traps are presented as Figures 3.2-I and 3.2-II. All storm drains outletting either directly into the Bay or into the detention/desilting basin, are first required to flow into a three chambered Water Quality Control Structure. These structures will assist in removal of silt or other particulate matter, oils and greases from the storm water. After the majority of the project is complete and landscaping is established, these structures should be cleaned at a minimum of twice a year (March and October).

B30 A monthly schedule for street sweeping has been added to the seventh mitigation measure in Section 3.2, Hydrology/Water Quality of the DEIR, Volume II.

Regarding erosion control, the following pages (II-86, II-87 and III-38 through III-42) from the proposed LCPR No. 8 describe the erosion control measures.

Regarding the desilting basin and the stormwater drainage system, the applicant's environmental consultant, A.D. Hinschaw Associates, has stated that the proposed freshwater marsh "could be used in conjunction with the detention/desilting basin to function as a retention facility during the dry season. This would eliminate freshwater flows to the 'F' & 'G' Street Marsh during the dry season. The detention/desilting basin was designed so that the peak discharges from the developed site are no greater than that from the site before development (10 year, 6 hour and 100 year, 6 hour storms were analyzed)." No preliminary design plan was presented by this consultant or the applicant, nor was information presented regarding operational details of the basin.

Desiltation Basin and Storm Water Drainage System

- B31 Comment acknowledged. Details of the monitoring plan will be addressed as part of the project-level EIR. Refer to General Response 3.2.1.

- B32 Refer to General Response 3.2.1. The applicant has committed to the use of USDA Soil Conservation Service design outfall protection structures to be used at the two outfalls located adjacent San Diego Bay. This design is considered to be the most appropriate and effective for the proposed use. A copy of the USDA design specifications for the outlet protection that would be installed to minimize erosion is included as Figure 3.2-V.

- B33 See General Response 3.3.8.1.

Very little information is provided in the draft EIR on the desiltation basin and stormwater drainage system. Knowledge of design and operation of these facilities is imperative as they have an effect on sensitive habitats including coastal salt marsh and intertidal mudflats. The LCP Resubmittal Specific Plan identifies the desiltation basin would be 1.3 acres with a capacity of 9.5 acre feet. The Service would like the opportunity to review a preliminary design plan for the desiltation basin. This plan should include a schematic layout of the basin and the wetland vegetation that would be planted around its perimeter. The plan should also identify the number, aerial extent and location of the wetland plant species that would be used in the revegetation effort.

The details pertaining to operation of the desiltation basin on a seasonal basis and during storm events must be identified. In discussions held with consultants hired by Chula Vista Investors it is our understanding that under normal circumstances the operation of the desiltation basin would allow no discharge of freshwater flows during the summer months into the salt marsh habitat of "F" and "G" Street Marsh. However, the desiltation basin would have sufficient storage capacity to release freshwater flows on a continuous basis to support an approximate 3.5 acre freshwater cattail marsh habitat creation project proposed for the eastern end of "F" and "G" Street Marsh. Additional information on the operation of the desiltating basin is needed.

- B31 In addition water releases from the desiltation basin should be monitored on a regular basis to ensure that pesticides, fertilizers and heavy metals are not being discharged into the wetland habitat at "F" and "G" Street Marsh. A monitoring plan should be developed which specifies how often monitoring would occur and what water quality parameters would be examined.

The Service is also concerned that the desiltation basin be properly sized to handle the projected runoff from the proposed Midbayfront development. A description of how the current size and capacity of the desiltation basin was calculated needs to be provided.

- B32 It appears from the description of the storm water discharge system provided in the draft EIR that not all storm water runoff would be collected and discharged to the desiltation basin. Some runoff waters would be directly discharged in intertidal mudflats adjacent to San Diego Bay. As acknowledged in the EIR discharge of storm water runoff could potentially result in scouring of the mudflats at the discharge point during the storm events. If major scouring of the mudflats occurred, sediments could be carried offshore impacting sensitive eelgrass beds that provide

valuable habitat for marine fish and a food source for waterfowl (i.e. brant). Storm water runoff could carry high loads of sediment that would be deposited on top of the mudflats. In addition to the problems associated with scouring and sediment deposition, large quantities of fresh water discharged on the mudflats can alter the diversity and biomass of the benthic invertebrate community associated with this habitat type. Benthic invertebrates are the primary food item for shorebirds. A reduction in overall invertebrate numbers could adversely affect shorebird utilization of the mudflats. This issue needs to be addressed.

B34 An alternative method for disposing storm water was proposed in the draft EIR. It involved the construction and placement of a pipeline through the intertidal mudflats and nearshore eelgrass beds into a deepwater boat channel. Once the pipeline was in place, storm runoff would be discharged directly to San Diego Bay. While there would be attendant impacts to eelgrass and intertidal mudflats requiring mitigation, long term impacts to the mudflats would be avoided.

A figure should be produced showing all proposed storm water discharge points, the amount of water that would be discharged at different storm events, the size of the pipe proposed to use to carry storm water discharges, and potential long and short term impacts to mudflats and eelgrass beds under the two alternatives discussed above.

Mosquito Control Efforts with Development of the Midbayfront.

B35 The development of the Midbayfront will bring people in close proximity to extensive areas known to provide breeding habitat for mosquitoes. People will ultimately demand that control measures be implemented when mosquitos become a nuisance or health risk. Unfortunately, control measures can involve the alteration of wetland habitat and/or the spraying of larvacides, adulticides, and pesticides which can potentially affect federally listed threatened or endangered species. The Service currently faces conflict in the Tijuana River Valley where the Robinhood Home development was constructed west of Interstate 5/Dairy Mart Road Exit. This past summer residents in this housing development complained to County Health Department about the mosquito problem and demanded that they take immediate action. The County sprayed pesticide over a large area of the Tijuana River Valley as a temporary solution to reduce mosquito numbers.

We recommend that a plan needs to be prepared by the City of Chula Vista and Chula Vista Investors to deal with this potential problem. The plan needs to identify potential mosquito breeding areas and biological controls that could be employed to keep the mosquito population at a reduced level so that it does not become a health nuisance or problem resulting in adverse effects to fish and wildlife and this habitat.

B34

Refer to General Responses 3.2.1, 3.2.1.1 and 3.3.8.1. Drainage of freshwater directly to San Diego Bay from the proposed project would occur at two points. Discharges would be conducted onto a rip-rap apron placed in a narrow fringe beach at the top of the existing mudflats. The flowline of the discharge pipes would be at 3.9 MLLW. Since these pipes lack water storage capacity, a somewhat constant flow of freshwater would be released onto the mudflats during low tides. The resulting effect of this release would be changes in sediment characteristics and a shift in the character of the invertebrate community associated with these areas, and a potential significant adverse change in the habitat suitability as a foraging area for shorebirds.

The impact area associated with these discharge points is unknown and would be difficult to determine due to the considerable amount of monitoring and testing that would be required; however, the affected area would generally be limited to a gradually widening fan below the discharge points. The total lengths of mudflat expected to be affected are 1200 feet at the northern discharge and 620 feet at the southern discharge point. The total mudflat area anticipated to be affected would be 3.3 acres. It should be recognized that not all values would be lost from these portions of the flats and that the vast majority of current habitat usage by avifauna and fishes would be expected to continue.

The proposed alternative to freshwater discharge onto the mudflats is to extend the pipes out past the mudflats, replace sediments over the pipeline, and restore the mudflat and eelgrass areas impacted by construction. The figures on the following page show this alternative disposal method concept. This alternative would have a greater short-term loss but would ensure no long-term impacts to the mudflats. It would also eliminate potential sedimentation and erosion impacts to eelgrass habitats located below the mudflats. This alternative would require excavation of a narrow trench through approximately 1425 linear feet of mudflat and soft bottom shallows for the northern discharge alignment, and through approximately 670 feet for the southern alignment. After the pipes are placed in the trenches, pre-project contours would be restored using the material removed during the excavation. Impacted mudflats would be expected to recover rapidly, while impacted eelgrass would be replanted over the pipeline in the areas from which it was removed.

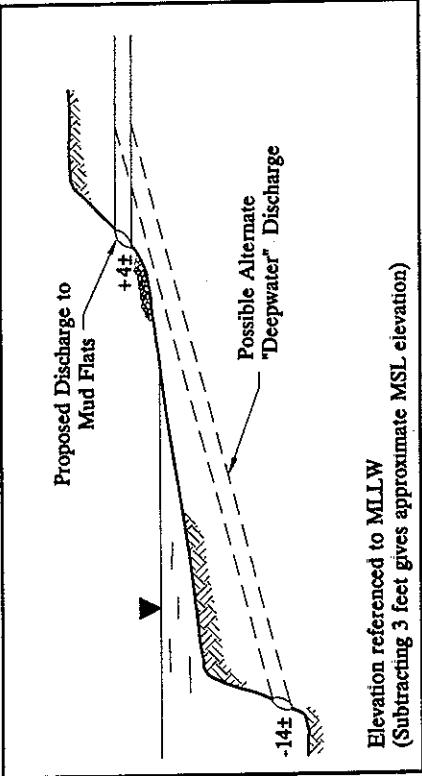
For reasons of cost and inconsistencies with existing federal permits under the current LCP, the proposed project has not incorporated the sub-tidal discharge alternative into the development plans. The project does propose post-development monitoring of the discharge points for five years following completion of the drainage facilities. If impacts were identified, action would be taken to rectify or mitigate the problems. After completion of corrective measures, another monitoring program would be required to confirm success of the project.

More information regarding freshwater discharge into San Diego Bay is provided in Sections 3.2 (Hydrology/Water Quality) and 3.7 (Biology) of the DEIR.

See General Responses 3.3.5.2 - 3.3.5.3.

B35

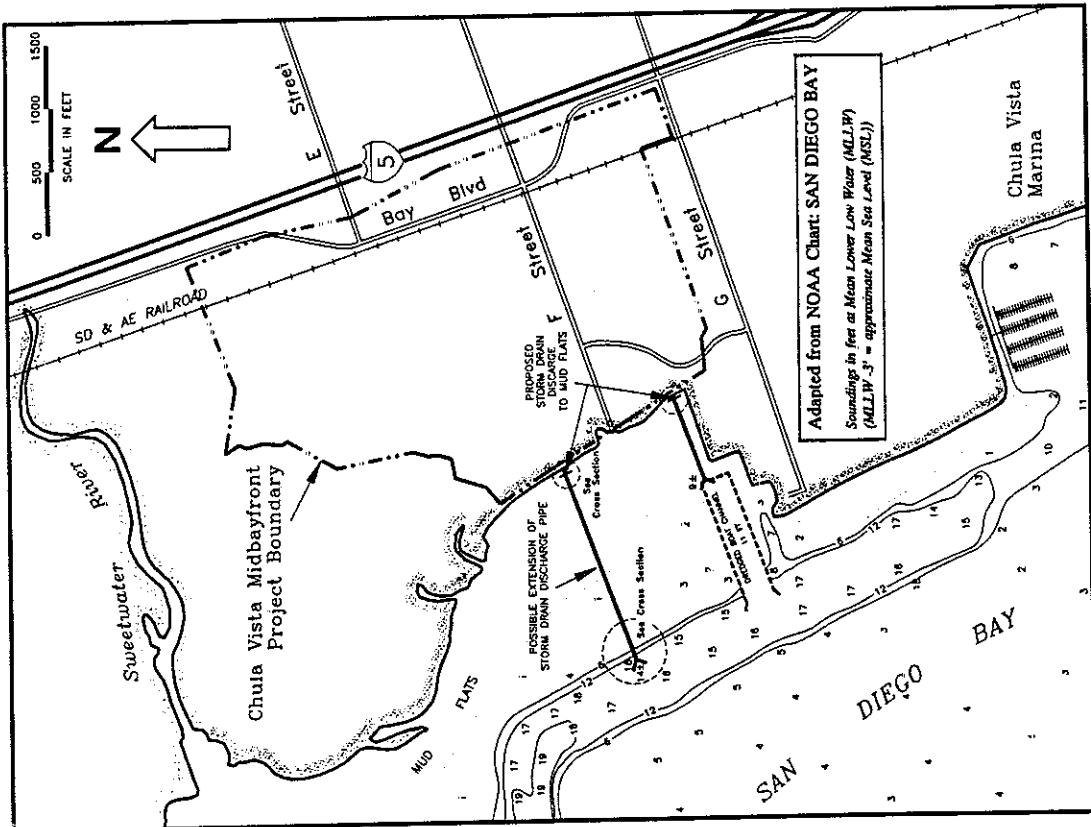
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Schematic Cross Section

Proposed Storm Drain Discharge
and "Deepwater" Alternate

LCP RESUME - TTA L #8



Alternate Storm Drain
Discharge Locations

LCP RESUME - TTA L #8

Noise and Air Quality Problems Associated with Cogeneration Facility

- B36** We are concerned with the proposed location of the cogeneration facility. It is Service's understanding that noise levels between 40 and 50 decibels would be emitted from the facility. It appears from the schematic that the proposed cogeneration facility would be approximately 150 feet from the southern edge of the "F" and "G" Street Marsh and 300 feet from the edge of the desiltation basin. Noise, if not limited, can interfere with avian vocalizations that serve many important functions including 1) indicating vigor and dominance in an individual, 2) advertising and attracting a mate, 3) establishing territory, 4) identifying an individual to its mate, parent, offspring, or adjacent territory holder, 5) spacing out birds of the same species in a given environment, 6) conveying information regarding enemies and food, and 7) teaching the young their species' song (Welty, 1982). Interference or masking of all or part of a vocalization could convey no message or the wrong message to the receiver. How much of a problem this is to the marsh and wading birds has not been studied, but it is reasonable to assume that in some instances the problem could be critical. For example, detection of warning signals (e.g. predator avoidance) by mate or offspring will be critical given the increase in numbers of avian and mammalian predators that would be attracted to the development (i.e. gulls, ravens, rats, etc.). If the cogeneration facility is to remain a feature of the Midbayfront development then should be relocated behind a proposed building. The building could then serve to buffer the sound emitted from this unit.
- B37** Another concern associated with the cogeneration plant is the particulate matter generated from the operation of the proposed facility. In particular the Service wants to know the chemical make-up of the particulates released, their concentration levels and their dispersal patterns. In order to address this problem, wind patterns associated with the various seasons in this area should be studied. If studies show that large concentrations of particulate matter would be expected in San Diego Bay or in Sweetwater Marsh potential adverse affects to fish and wildlife must be ascertained. If serious effects are anticipated then consideration should be given to moving the cogeneration facility and/or using a feasible technique or alternative that would reduce adverse impacts to an acceptable level.
- Control of Pesticides, Herbicides, and Fertilizers Proposed to be Used in the MidbayFront
- B38** A current list of pesticides and herbicides that are restricted from use in or near wetlands or aquatic systems should be obtained from the Environmental Protection Agency. Based on this list City of Chula Vista and Chula Vista Investors should develop
- B36** Noise from the proposed plant at its building exterior is noted as being in the 40 to 50 dB range. With geometrical spreading in the transit from source to receiver, noise levels will decrease at a rate of about 6 dB per additional doubling of distance. Within the marsh and desilting basin, the plant noise level will be from 30 to 40 dB. The noise setting showed that freeway background noise levels on the project site are around 50 dB. Because of the logarithmic nature of the decibel sound pressure level descriptor, the plant noise increment will not measurably change the observed sound level for the "with project" condition. If any masking of avian vocalization does occur, it might be from freeway noise, but not likely from the cogeneration facility. Relocation of the cogeneration facility will not mitigate the bird communication problem because greater noise impacts already exist from Interstate 5.
- B37** Particulate matter generation from the combustion of natural gas or propane as proposed for the cogeneration facility is negligible. Pipeline quality standards require the pretreatment of gas to remove possible impurities such that particulate generation during combustion is very small. The USEPA, in its "Compilation of Air Pollutant Emission Factors" (AP-42), indicates that particulate sizes are less than 1 micron for gas combustion such that deposition rates for these materials is nearly zero. Because the emission rate is very small, and there is little or no likelihood of any deposition on nearby sensitive habitats, a detailed analysis of particulate chemistry (which varies somewhat from vendor to vendor and plant to plant) does not appear to be warranted at this time.
- B38** Mitigation Requirements 9 and 10 on Volume II pg. 3-112 were incorporated specifically to address these concerns. As follow-up to this recommendation, an attempt was made to obtain the EPA list. Requests for the list were made to various state and federal agencies including the EPA, but none of the agencies had the list. For this reason, these measures have been redrafted in the recirculated DEIR to require that a Landscape Maintenance Plan be developed at the project level and shall be subject to project level environmental review. This plan shall include: (1) an identification of all chemicals (including fertilizers, herbicides, pesticides, fungicides, etc.) to be applied in the landscaping program and their EPA "wetland compatibility" status; (2) a commitment not to use long-lived pesticides or herbicides; (3) a commitment not to chemically treat buffer areas or any other native plant habitats; (4) an identification of where chemical applications (by type) are to occur; (5) an identification of conditions which shall dictate application requirements; (6) a commitment to utilize only state-certified applicators; and (7) a commitment to use of low-water plantings and/or low volume irrigation systems which minimize nuisance water runoff from landscaped areas.
- Development of a landscape chemical application program in coordination with USFWS, CDFG, and the City of Chula Vista has been committed to by the applicant in (Section IV: Operation and Maintenance Requirements, of CVI's proposed "Design Requirements"). This commitment and the above condition are believed to be adequate to address these concerns at the plan level.

local ordinances that would restrict application of toxic substances in the Midbayfront.

B39 The draft EIR discusses significant problems with fertilizers that enter the marsh. The application of fertilizers if not carefully controlled can supply nutrients to the marsh which can lead to the eutrophication of the system. Under extreme conditions, this eutrophication process can result in reduced oxygen levels in the water causing massive die-offs of fish and invertebrates. The Service would like a specific plan developed to address this problem. Consideration should be given to having retention dikes and buffer strips as some of the measures that could be employed to address this problem.

Control of People and Mammals From Entering Sweetwater Marsh National Wildlife Refuge

B40 The draft EIR does not sufficiently address the control of people and mammals from entering Sweetwater Marsh NWR. While it was mentioned that a fence would need to be placed between the Midbayfront and the Refuge, no information was provided on the location and design of this fence. This information is of key importance to the Service.

One potential problem area where public access on the Refuge appears to be unrestricted is at the western edge of the 10 acre public lagoon. Access to the mudflats and adjacent marsh areas must be controlled at this point. A combination of fence construction and wetland creation may be a means for controlling access.

In the design of the fence consideration should be given that the top portion of the fence be designed to deter predator perching particularly by American kestrels.

B41 Potential future access problems would also result from boaters and jet skiers who would be attracted to the development. A series of buoys with signs should be placed in San Diego Bay to protect inshore eelgrass beds and shallow subtidal/intertidal mudflats and the waterfowl and shorebirds that utilize them. The Service would like assurances that this measure can be a feature of the project.

B39 See Response B38. See also General Response 3.2.1.1.

B40 See Response B24. Also, we concur that access to the mudflats and marshlands of the refuge need to be protected from encroachment. The conflicting policies of the Coastal Act, Section 30210-30212 requiring shoreline access and Section 30230-30231 and 30236 providing for protection of areas of special biological significance, are at odds at the interface of San Diego Bay and the proposed shoreline parklands. While the marshlands have been recognized as intrinsically more important as a ecological reserve than a public use area, the mudflats of the bayfront have not yet been identified as having overriding biological importance.

It is noted that these mudflat habitats are extremely important to resident and migratory birds and that high levels of human activity on these mudflats will affect the avian foraging and loafing habitat values of these areas. It should however, also be noted that birds engaged in foraging or loafing activities are less impacted by sporadic or infrequent disturbance than are nesting, roosting, or secretive birds found in marshlands. Further, these birds are less affected by activities occurring in adjacent areas. For these reasons, it has been suggested that a reasonable blend of public access and resource protection would be to design a physical barrier within the park which would allow no physical mudflat access while allowing passive use of bayfront park areas (i.e. limited or no additional buffering of mudflats).

This approach is considered reasonable and would not be expected to result in a significant impact to shorebird habitat. To achieve this balance, the DEIR has incorporated the following mitigation measure:

No direct physical access to San Diego Bay mudflats will be provided from lands located within the Midbayfront. Fencing and/or other physical barriers are to be used to preclude such access. Bayfront parklands will provide scenic overlooks and trails. Water access is to be provided to the public lagoon area.

B41 We concur. This item should be made a part of the plan to control human activities as discussed in Section IV of CVI's proposed "Design Requirements." Existing navigational channel markers could be equipped with signs and additional buoys could be posted around the refuge. This was included as mitigation measure #20 on Volume II pg. 3-14. This action would require concurrence by the SDUPD and the U.S. Coast Guard.

Specific Comments

Draft EIR, Section 3. "Environmental Impact Analysis"
Construction Noise. Page 65

B42 Construction noises, particularly involving demolition or earth moving equipment where the decibel level of 60 dB would be exceeded may result in harassment of the endangered light-footed clapper rail. Harassment of a federally listed threatened or endangered species is a violation of Section 9 of the Endangered Species Act. The Service should be consulted in the planning stages of project design if construction activities involve use of equipment which exceeds 60 decibel level. The noisiest construction operations should avoid the clapper rail nesting season which is from March through September.

Draft EIR, Section 3. "Environmental Impact Analysis", Page 86

B43 This section of the report states that the northern harrier does not nest on-site. Two northern harrier nests were found at Sweetwater Marsh NWR in 1990.

Draft EIR, Section 3. "Environmental Impact Analysis", Page 97

B44 The document notes that a predator management plan was prepared for the Chula Vista Bayfront in 1987. The Service did not review or provide comments on this plan. We would appreciate receiving a copy of the document.

B45 It is also stated in this section that four separate entities consisting of the Cities of Chula Vista and National City, San Diego Unified Port District and the Service will probably need to sign joint powers agreements to successfully implement mitigation measures in controlling human and pet access problems. If joint powers agreements need to be formulated and signed by the above entities, they need to be drafted soon. We recommend that these agreements should be signed before project construction or park development is started.

Appendix C. Biological Resources - Midbayfront. An Evaluation of Avian Flight Activities

B46 A visual analysis of how bird flight activities could be disrupted by the various development alternatives should be depicted. The "Flight Patterns By Guild" (Figure 24) can be displayed on clear acetate. These figures can then be overlaid on the various alternative plans shown on pages 11, 13, 14, 16, 17, and 18. The "Flight Patterns By Guild" figures would need to be enlarged to match the scale of the alternative plans. In addition the proposed plan, alternative plans 7 and 7c or any new revised plan Chula Vista Investors or the City of Chula Vista wants to pursue could be analyzed. The height of the buildings should be noted on all plans analyzed. This information should be provided in the final EIR for the Midbayfront.

B42 Mitigation measure #7 in Volume II pg. 3-112 includes specific requirements regarding distance from sensitive areas and activity timing to minimize impacts of construction noise and activity on state and federally-listed species.

B43 Comment noted. Text will be amended to reflect these new data.

B44 This predator management plan was included as Appendix E in the document prepared by Wetlands Research Associates, Inc. titled Conceptual Design for Chula Vista Bayfront Restoration and Enhancement Plans which was provided to the Service in 1986 and on numerous occasions since the initial release. An additional copy has been sent to the Service.

B45 See General Response 3.3.8.2. Mitigation measures # 16 and 17 have been modified to include more detail regarding the predator management program and associated agreement. The mitigation measure 17 now states that a joint powers agreement would be required as a condition of approval at the project level environmental compliance stage.

B46 Comment noted. Information is provided in the DEIR, Volume II.

Appendix C. Biological Resources - Midbayfront, An Evaluation of Avian Flight Activities, Figures 17 through 23

- B47 Comment noted. Information is provided in the DEIR, Volume II.
- B48 See discussions of the difference between flight grid activity levels and general flight patterns (pp. 37-49, Flight Activities Study section of Appendix C, Biological Technical Report). See also the discussion of how building impacts were calculated (pp. 49-58) and General Response 3.3.1.1.
- B49 With respect to calculations of levels of affected flights of birds in the aerial fish foragers guild, several interrelated factors were at work in the data. First, the total number of flights recorded for the guild were quite small relative to most other guilds (3,000 flights/hr was the global mean for the most active grid in the study area). For this reason, only a few flights sharing a grid cell with a "building" could represent a fairly high percentage of all flights. Second, aerial fish foragers which did cross bayfront uplands tended to fly at elevations which were most representative of proposed bayfront building heights (i.e., 26-50 and 51-100 feet). Finally, no set patterns of intensity or direction of flights were observed in flights over the upland areas. As discussed, this is a critical component of a "flight pattern." For this reason, these flights went unrecorded in Figure 24, in accordance with plotting procedures outlined in the Flight Study (Flight Activities Study section of Appendix C, Page 37). If Figure 20 of the Flight Study document is reviewed, it is possible to account for the "missing" flights.
- B50 Comment noted. Information is included in the DEIR, Volume II.
- B51 See General Response 3.3.8.2. The intent of recommending that the predator management staff have duties of monitoring and enforcement of biological mitigation measures is based on the fact that much of a predator manager's job is similar to that of a firefighter (i.e., on-call insurance and damage control). For this reason, the predator management staff will have additional time for other duties. It is suggested that the additional time be spent ensuring that the program is being adhered to by the general public and local residents and merchants. In addition, most individuals with predator control experience are trained first as biologists and typically have an ecological background. For this reason, they would be well suited to perform monitoring of other biological mitigation measures in the bayfront.
- B52 Comment noted. See General Response 3.2.1, and see responses B11 and Section 5.0 of Volume 1 of the DEIR. With respect to the locations of passive parklands and the bicycle/pedestrian path proximate to the San Diego Bay and Sweetwater Marsh NWR, these comments have been incorporated in the Alternative 9 design and impacts are discussed in Section 5.2 in the DEIR, Volume I.
- B53 In summary there are significant concerns associated with the proposed development which have been addressed by the Service

under separate subheadings listed above. These issues, if not properly dealt with, would result in cumulative adverse affects to the public fish and wildlife resources of Sweetwater Marsh NWR including Federally listed endangered species. Of major concern to the Service is the height and close proximity of the proposed development to the marsh. On a conceptual level we prefer a development plan similar to Alternative 7a which has no buildings west of Marina Parkway has greatly reduced heights for the proposed apartment buildings north of "E" Street and shows "passive" designation zones for the park/open space adjacent to San Diego Bay and Sweetwater Marsh NWR. One serious drawback with this plan is the bicycle and pedestrian path that is proposed west of the "passive" park designation zone. The bicycle and pedestrian path should be located east of the "passive" park zone to protect shore, marsh and wading birds and the Belding's savannah sparrow from human disturbance.

We look forward to continuing close interaction with Chula Vista Investors to resolve the issues we have raised. To ensure that our concerns are dealt with in a thorough and timely manner we recommend Chula Vista Investors prepare a specific mitigation plan for each issue. These plans should provide a specific list of mitigation measures that Chula Vista Investors would be willing to implement. In addition the Service would be willing to work with Chula Vista Investors and you and your staff on potential modifications to the proposed plan including relocation and reduced heights of buildings. Coordination on the Midbayfront should continue to be conducted with Martin Kenney of my staff at (714) 643-4270 and Marc Weitzel, Refuge Manager, Sweetwater Marsh NWR (619) 575-1290.

Sincerely,

Martin Kenney
Martin Kenney
Acting Office Supervisor

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Comment C

STATE OF CALIFORNIA—THE RESOURCE AGENCY
CALIFORNIA COASTAL COMMISSION
SAN DIEGO COAST DISTRICT
323 CAMINO DEL RIO SOUTH, SUITE 125
SAN DIEGO, CA 92108-3326
(619) 277-3740



Comment C - California Coastal Commission

September 25, 1990

Robin Putnam
City of Chula Vista
Community Development Department
276 Fourth Avenue
Chula Vista, CA 92010

Re: Chula Vista Midbayfront Local Coastal Program Resubmittal
#87/SCH #89062807

Dear Ms. Putnam,

This office has reviewed the Draft Environmental Impact Report (DEIR) for the Midbayfront LCP Resubmittal #8. On the whole, we believe the environmental document represents a very credible and complete analysis of the anticipated environmental impacts resulting from the proposed LCP Resubmittal and the delineated Development Plan. The following comments have been prepared by staff to identify particular Coastal Act concerns or request clarification on the environmental analysis completed to date.

C1 With regard to biological concerns, it should be noted that the Coastal Commission has not endorsed the conversion of the brackish marsh area (immediately north of F Street) to a freshwater detention basin. As such, the permissibility of this proposed conversion will still need to be assessed under the Chapter 3 Policies of the Coastal Act. In reviewing the proposed mitigation measure for this conversion, which calls for the creation of additional marshlands adjacent to the F/G Street marsh, it is unclear whether or not this measure represents a net loss standard or some other replacement ratio.

C2 The Commission has required four to one replacement areas for such marshland conversions, if permitted, in many circumstances. In light of its future management as a detention basin, some discussion on the appropriate replacement ratio is warranted. In addition, another proposed mitigation measure recommends that infrequent maintenance of the detention basin be conducted, after initial construction periods. This measure should be clarified: At present, it could be interpreted that the basin should not be well-maintained during the critical construction phase. Rather, I believe it is intended to promote

- C1 Comment noted. See General Response 3.3.6.2 regarding replacement ratios and General Response 3.3.6.3 regarding Responsible Agency Purview. It is acknowledged that the Coastal Commission will review the conversion of the existing brackish marsh to a freshwater detention basin under Chapter 3 of the Coastal Act, when they consider the proposed Local Coastal Program Resubmittal.
- C2 Comment noted. See General Responses 3.3.6.2, 3.3.6.3 and 3.2.1.1. The commentor is correct in her interpretation of the intent of the recommendation for reduced maintenance. It should be noted, however that the mitigation measure referred to (measure #4, Volume II Pg. 3-111) is in error in that it should have indicated a need for some low-level of ongoing maintenance requirement to ensure hydrologic functioning. This has been included in the DEIR.

- C3 recovery and establishment of a freshwater system/detention basin after the mass grading and principal construction periods have been completed.
- C3 As a result of the identified predator/competitor threats and the increased human activity/pet presence along the marshlands, a proposed mitigation measure recommends the creation of 13.2 acre, ir-kind habitat area within the Reserve. The measure appears to call for one-to-one replacement for the identified impacts. Again, in conjunction with our comments above, some amplification of how the particular acreage was determined would be helpful. In addition, it might also be beneficial to discuss the relative merits of the existing certified land uses for the Midbayfront, which call for less residential development, as a means of curtailing the noted conflicts of increased human activity in and around the marshlands.
- C4 We concur with this concern. See General Responses 3.3.7 and 3.3.6.1. Also refer to discussions in DEIR pp. 3-91 to 3-97.
- C5 Comment noted. See General Response 3.3.6.2. Also it is important to recognize that substantial effects of habitat degradation are associated with parklands as well as residential activities. Potentially the least damaging of all activities would be light industrial uses identified in the existing certified LCP.
- C6 We concur with this concern. See General Responses 3.3.7 and 3.3.6.1. Also refer to discussions in DEIR pp. 3-91 to 3-97.
- C7 The "D" Street fill has never been under agriculture. We concur that the "D" Street tern colony should be identified as sensitive. Mudflat areas have been identified in the text of the DEIR as sensitive. Salt panne habitats are discussed in the DEIR text but are frequently too interspersed with other habitats to be graphically indicated. All of these panne habitats, with the exception of those associated within the 3.2 acre brackish water marsh, occur within protected areas of the NWR.
- C8 See General Response 3.2.3.11 and 3.2.3.5.

C9 In assessing the potential impacts of the proposed Development Plan on biological resources and sensitive species in the Midbayfront, our staff remains concerned about the isolation of the F/G Street marsh, particularly in light of the intensity and scale of development now proposed. In addition, it would also appear extremely difficult to accurately judge, quantify and thus be able to mitigate the potential impacts on sensitive species created by the dominance and presence of the proposed structures along and around the marshlands.

C10 With regard to the delineation of resource areas, the designations for D Street should be re-examined. When and where was any historic agricultural use evident on the D Street fill area? In addition, it would also seem important to recognize the least tern sanctuary and any related salt pan areas, sandy substrates or mudflats as sensitive resources.

C11 Lastly, relative to construction or grading impacts on biological resources, there did not appear to be any discussion of the potential impacts resulting from construction de-watering practices or the groundwater well sources for lagoon creation/maintenance on the hydrologic regime or water sources necessary for the continued health and functional capacity of the adjacent marshlands. In the segmented land outfall project in the Tijuana River Valley, there was an identified concern in maintaining the riparian corridor and special mitigation measures were developed for that contingency. With regard to grading restrictions, the City of Chula Vista developed special grading provisions for coastal zone areas which drain into

C7 These comments are noted. See revised Analysis of Significance portion of the Transportation/Access section of the DEIR. This section provides details regarding traffic congestion impacts of the proposed project.

wetlands last year. The environmental document should review and incorporate them as a mitigation requirement.

C7 With regard to public access and traffic circulation issues, the document, once again, includes an acceptable review of these matters. However, when the proposed LCP amendment is reviewed, it will be important to develop a detailed public access component which will balance the relative need to improve coastal access opportunities with sensitive resource constraints. In addition, while the environmental document identifies the increased trips generated by the proposed plan and prescribes certain mitigation measures, primarily affecting E Street, the document does not really evaluate potential public access impediments created by changes in road capacity. Although the present proposal does not involve any realignments or road improvements which should present a resource conflict, any future changes which would alter or encroach on sensitive habitats would need to be addressed.

C8 The document accurately identifies the permitted uses and building heights under the presently certified local coastal program. It should be clarified, however, that the maximum height of a prospective hotel up to 12 stories was a conditional provision tied to the commitment of substantial public open space amenities. The general height limitations were, as the document notes, much lower. In assessing the relative merits for any increased heights within the development scheme, a key measure would be the commensurate increase in the amount of usable, open public space at the groundlevel, contiguous with other public areas. As the environmental document points out, there is less parkland and open space being provided under this proposal than in the existing certified LCP.

C9 On another point regarding the provision of public parks or other public/semi-public acreage, it does not seem appropriate to include visitor commercial or retail areas in this category. Quasi-public land uses may identify and have appropriately included such facilities as public recreational uses or public institutions, but never recognized private commercial developments.

Once again, we appreciate the opportunity to comment on the draft environmental document. On the whole, as I stated, the document appears to identify all the potential environmental impacts. This office, however, has many concerns relative to the proposed intensity and scale of development presented here, in addition to the noted resource conflicts, and will be

Robin Putnam
September 25, 1990
Page 4

C10 This comment is noted.

Preparing detailed comments on the resubmittal for the Planning Commission's November hearings on the matter. As such, this office did not want to endorse a particular alternative identified in the DEIR. Rather, the project proponent will need to re-evaluate the proposed development in light of the noted environmental and land use concerns. These comments have been drafted by staff and any action ultimately taken on this project will be done by the Coastal Commission itself, based on a review of the project's consistency with Chapter 3 of the Act. If you have any questions, please do not hesitate to call me at the above office.

sincerely,

Deborah N. Lee
Deborah N. Lee
Assistant District Director

DNL:d13572L)

cc: Chuck Damm
Martin Kenney

Memorandum

Comment D

The Resources Agency

Date : **DP 4 1900**

To : **1. Gordon F. Snow, Ph.D.
2. Assistant Secretary for Resources
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010
Attention: Robin Putnam**

From : **Department of Water Resources
Los Angeles, CA 90055**

Subject : **DEIR for Chula Vista Midbay front, LCP, Local Coastal Program Resubmittal
#8 Amendment, dated August 1990. SCH 89062807**

Your subject document has been reviewed by our Department of Water Resources staff. Recommendations, as they relate to water conservation and flood damage prevention, are attached.

D1 After reviewing your report, we also would like to recommend that you further consider implementing a comprehensive program to use reclaimed water for irrigation purposes in order to free fresh water supplies for beneficial uses requiring high quality water supplies.

For further information, you may wish to contact John Pariewski at (213) 620-3951. Thank you for the opportunity to review and comment on this report.

Sincerely,


Charles R. White, Chief
Planning Branch
Southern District

Attachments

Department of Water Resources Recommendations
for Water Conservation and Water Reclamation

To reduce water demand, implement the water conservation measures described here.

Required

The following State laws require water-efficient plumbing fixtures in structures:

- o Health and Safety Code Section 17921.3 requires low-flush toilets and urinals in virtually all buildings as follows:

"After January 1, 1993, all new buildings constructed in this state shall use water closets and associated flushometer valves, if any, which are water-conservative water closets as defined by American National Standards Institute Standard A112.19.2, and urinals and associated flushometer valves, if any, that use less than an average of 1-1/2 gallons per flush. Blowout water closets and associated flushometer valves are exempt from the requirements of this section."
- o Title 20, California Administrative Code Section 1604(f) (Appliance Efficiency Standards) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, and sink faucets, as specified in the standard approved by the American National Standards Institute on November 16, 1979, and known as ANSI A112.18.1M-1979.
- o Title 20, California Administrative Code Section 1606(b) (Appliance Efficiency Standards) prohibits the sale of fixtures that do not comply with regulations. No new appliance may be sold or offered for sale in California that is not certified by its manufacturer to be in compliance with the provisions of the regulations establishing applicable efficiency standards.
- o Title 24 of the California Administrative Code Section 2-2307(b) (California Energy Conservation Standards for New Buildings) prohibits the installation of fixtures unless the manufacturer has certified to the CEC compliance with the flow rate standards.
- o Title 24, California Administrative Code Sections 2-5352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. These requirements apply to steam and steam-condensate return piping and recirculating hot water piping in attics, garages, crawl spaces, or unheated spaces other than between floors or in interior walls. Insulation of water-heating systems is also required.

- o Health and Safety Code Section 4047 prohibits installation of residential water softening or conditioning appliances unless certain conditions are satisfied. Included is the requirement that, in most instances, the installation of the appliance must be accompanied by water conservation devices on fixtures using softened or conditioned water.

- o Government Code Section 7800 specifies that lavatories in all public facilities constructed after January 1, 1985, be equipped with self-closing faucets that limit flow of hot water.

Recommendations to be implemented where applicable

Interior:

- i. Supply line pressure: Water pressure greater than 50 pounds per square inch (psi) be reduced to 50 psi or less by means of a pressure-reducing valve.
2. Drinking fountains: Drinking fountains be equipped with self-closing valves.
3. Hotel rooms: Conservation reminders be posted in rooms and restrooms. * Thermostatically controlled mixing valve be installed for bath/shower.
4. Laundry facilities: Water-conserving models of washers be used.
5. Restaurants: Water-conserving models of dishwashers be used or spray emitters that have been retrofitted for reduced flow. Drinking water be served upon request only.*
6. Ultra-low-flush toilets: 1-1/2-gallon per flush toilets be installed in all new construction.

Exterior:*

- i. Landscape with low water-using plants wherever feasible
2. Minimize use of lawn by limiting it to lawn-dependent uses, such as playing fields. When lawn is used, require warm season grasses.
3. Group plants of similar water use to reduce overirrigation of low-water-using plants.
4. Provide information to occupants regarding benefits of low-water-using landscaping and sources of additional assistance.

*The Department of Water Resources or local water district may aid in developing these materials or providing other information.

5. Use mulch extensively in all landscaped areas. Mulch applied on top of soil will improve the water-holding capacity of the soil by reducing evaporation and soil compaction.
6. Preserve and protect existing trees and shrubs. Established plants are often adapted to low-water-using conditions and their use saves water needed to establish replacement vegetation.
7. Install efficient irrigation systems that minimize runoff and evaporation and maximize the water that will reach the plant roots. Drip irrigation, soil moisture sensors, and automatic irrigation systems are a few methods of increasing irrigation efficiency.
8. Use pervious paving material whenever feasible to reduce surface water runoff and to aid in ground water recharge.
9. Grade slopes so that runoff of surface water is minimized.
10. Investigate the feasibility of using reclaimed waste water, stored rainwater, or grey water for irrigation.
11. Encourage cluster development, which can reduce the amount of land being converted to urban use. This will reduce the amount of impervious paving created and thereby aid in ground water recharge.
12. Preserve existing natural drainage areas and encourage the incorporation of natural drainage systems in new developments. This aids ground water recharge.
13. To aid in ground water recharge, preserve flood plains and aquifer recharge areas as open space.

Department of Water Resources
Recommendations for
Flood Damage Prevention

In flood-prone areas, flood damage prevention measures required to protect a proposed development should be based on the following guidelines:

1. It is the State's policy to conserve water; any potential loss to ground water should be mitigated.
2. All building structures should be protected against a 100-year flood.
3. In those areas not covered by a Flood Insurance Rate Map or Flood Boundary and Floodway Map, issued by the Federal Emergency Management Agency, the 100-year flood elevation and boundary should be shown in the Environmental Impact Report.
4. At least one route of ingress and egress to the development should be available during a 100-year flood.
5. The slope and foundation designs for all structures should be based on detailed soils and engineering studies, especially for hillside developments.
6. Revegetation of disturbed or newly constructed slopes should be done as soon as possible (utilizing native or low-water-using plant material).
7. The potential damage to the proposed development by mudflow should be assessed and mitigated as required.
8. Grading should be limited to dry months to minimize problems associated with sediment transport during construction.

Comment E Business, Transportation and Housing Agency
Memorandum

To : State Clearinghouse
 Attention Terri Lovelady
 From : DEPARTMENT OF TRANSPORTATION
 District 11

Date : September 19, 1990
 File No.: 11-SD-005
 8.6

Subject: DEIR for the City of Chula Vista Midbayfront LCP Resubmittal
 No. 8, Amendment: SCH 89062B07

Caltrans District 11 comments are as follows:

- E1.** Page 2-5, developer proposed traffic improvements - The five improvements will require early coordination with our agency. In addition, the restriping, items #1 and #4, will be permitted only if full standards are provided. The DEIR needs to discuss the feasibility of that restriping.
- E2.** Page 3-190, TDM strategies - It's not clear why the applicant cannot provide park and ride lots, promote ridesharing, commit to flexible work shifts, or provide the improvements in #7 (signal timing, signal phasing, additional geometric improvements) as part of the mandated TDM strategies.
- E3.** Feeder service to the trolley is an additional strategy that should be considered for the mandated TDM measures.
- E4.** Page 3-191, Analysis of Significance - Interstate Route 5 ramps at "E" Street will have levels-of-service E and F. We note the determination has been made that measures to provide levels-of-service C and D are not agreed to by an important adjacent landowner and will not be proposed by the developer. Although, in this case, the cited significant impacts may not be fully mitigable, there should be an analysis for proportional interchange mitigations on the part of the developer and the City of Chula Vista.
- E5.** In general, the DEIR does not fully discuss the project-specific or cumulative traffic impacts of this large development as they relate to Interstate 5. Also, the listed mitigations will not maintain adequate levels-of-service at the "B" Street interchange.

Comment E - State of California, Department of Transportation, District 11

- C**omment E - State of California, Department of Transportation, District 11
- E1** The developer proposed improvements, which are retitled Planned Roadway Improvements in Volume II on page 3-182 will be coordinated with Caltrans. It is recognized that the restriping and signal modification can be performed only after Caltrans' review and approval. Also, refer to Appendix G for a response letter drafted by Mr. Harold Rosenberg, City Traffic Engineer, dated November 11, 1990. Please note that additional language has been added to the Transportation/Acces Section of the EIR which emphasizes that these measures are only feasible mitigations if approved by Caltrans.
- E2** There are locations within the Midbayfront area where peripheral parking (within SDG&E easement) could be used for park-and-ride lots, if the demand for such lots warranted their installation. However, there may not be such a demand since the residential elements of the proposed plan would be approximately 1,000 feet from the lot locations.
- The promotion of ridesharing and committing to flexible work shifts are good TDM strategies, but can only be applied by future property owners and employers within the Midbayfront area. Any commitment to TDM measures should be determined during subsequent project specific review and not during the LCP Resubmittal review.
- Signal timing and signal phasing are generally controlled by the agency owning the traffic signal system and are beyond the control of the applicant. However, modifications to existing signal operations (physical modifications or phasing modifications) will be detailed in the city/developer development agreements negotiated during project-specific review.
- Additional geometric improvements may be appropriate mitigation measures as identified during the EIR review and certification process. Also, additional geometric mitigation beyond what is identified in the DEIR may be required during subsequent project-specific review of individual phases of implementation.
- E3** Feeder service to the trolley is a good TDM strategy, but any commitment to TDM measures should be determined during subsequent project specific review and not during the LCP Resubmittal review.

- E4 The proportional responsibility for mitigation measures needed to provide level-of-service "C" or "D" will be assigned during project specific review.
- E5 The revised LCP Amendment is estimated to generate approximately 6,500 ADT more than the previously approved LCP. As assumed in the DEIR, only 75 percent of this additional ADT, or only about 4,900 ADT, is distributed to I-5. The additional ADT on I-5 is a small percentage (less than 2 percent) of the cumulative year 2010 freeway volumes forecast by the SANDAG Regional Transportation Plan (RTP), and is probably absorbed in the posted volume due to rounding off of the original data. The Regional Transportation Plan guides the coordination and programming of regional improvements among the local, state, and federal agencies. The Chula Vista General Plan land use element, including the approved LCP land use assumptions for the year 2010 traffic forecasts, was used to develop recommendations in the RTP. If that is the case, then the RTP should be considered as providing the cumulative analysis for I-5.

The listed mitigation measures, including the widening of Bay Boulevard at "E" Street, are projected to provide level-of-service D in the p.m. peak hour, at build-out, at the "E" Street southbound interchange off-ramp, which is considered acceptable.

Our contact person for Interstate 5 is Jim Linthicum, Project Manager, Project Studies Branch "B," (619) 688-6952.

[Signature]
JAMES T. CHESHIRE, Chief

Environmental Planning Branch

MO:wkb

Comment F

STATE OF CALIFORNIA—THE RESOURCES AGENCY

DEPARTMENT OF FISH AND GAME

P.O. BOX #4009

SACRAMENTO, CALIFORNIA 94244-2090

(916) 445-3531

RECEIVED

SFP 21 1990

Community Development Dept.

September 21, 1990

Ms. Robin Putnam
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

Dear Ms. Putnam:

Draft Supplemental Environmental Impact Report (EIR) - Chula Vista Midbayfront Local Coastal Program Resubmittal No. 8 Amendment, San Diego County - SCH 89062807

A Department of Fish and Game biologist familiar with the project area has reviewed the subject document for amending the Chula Vista Midbayfront LCP Resubmittal No. 8 and the corresponding changes to the Chula Vista's General Plan Zoning Code and Bayfront Redevelopment Plan. The Plan calls for development of the Midbayfront (Subarea 1) adjacent to San Diego Bay and the Sweetwater National Wildlife Refuge within the City of Chula Vista, San Diego County. The proposed development would include high-rise hotels (up to 26 stories), high-rise apartments, bungalow-type hotel units, retail shops, restaurants, offices, a cogeneration facility, a conference center, and athletic facilities including a tennis complex, swimming facility, and an ice rink. Also two manmade lagoons (10 acres and 2.6 acres) and park areas(s) for public, resident and visitor uses would be included in the project. The project site covers approximately 135 acres composed of primarily disturbed areas/agriculture lands with some brackish marsh (acres) and some urbanized areas. It is immediately adjacent to Sweetwater Marsh and San Diego Bay where the number of sensitive species and existence of quality wetland habitat is significant.

The Department's main concern is that the proposed project will have severe adverse impacts to the adjacent wetlands that are managed by the U.S. Fish and Wildlife Service as a National Wildlife Refuge. The overall impact of development with increased people, activity, trash, pets/pests, traffic, construction, noise, lighting, predator/prey, drainage problems, sedimentation, erosion, contaminants, invasive plants and build-out of an area now serving as a buffer to the sensitive wetlands will adversely affect several Federally-listed and State-listed endangered, threatened, and sensitive species. The species of primary concern are the California least tern, the light-footed clapper rail, the Belding's savannah sparrow, the California brown pelican, salt marsh bird's beak, and associated shore bird and waterfowl species that utilize the marsh in significant numbers on a seasonal basis.

George D. Kuehne, Governor



Comment F - State of California, Department of Fish and Game

Ms. Robin Putnam -2- September 21, 1990

Any direct, indirect, or cumulative impacts to fish and/or wildlife resources will significantly affect the current use of Sweetwater Marsh and San Diego Bay as fish and wildlife habitat of statewide significance. Based on the alternatives discussed in the Draft EIR, the following specific comments are provided as our recommendations and suggestions for selecting a feasible implementable project that would reduce adverse impacts to sensitive species and habitats to a level of nonsignificance.

F1 1. The project as proposed is too close to wetland resources. Alternative 7a (Park/Open Space Concept) may be feasibly implementable and, with proper care, would be far less impacting than other alternatives discussed. Should this alternative prove feasible, we would recommend its selection as the most environmentally sound of available developmental options.

F2 2. The "Predator Management Program", as described in the document, is not realistic. The Predator Management Program would be more consistent with resource management of the adjacent marsh if it were also managed by the U.S. Fish and Wildlife Service in consultation with the Department. Species-specific issues would, by virtue of familiarity as well as the "National Wildlife Refuge" designation of Sweetwater Marsh, be better directed by the U.S. Fish and Wildlife Service than by the Bayfront Conservancy or other multi-jurisdictional or private organization. As a matter of course, the U.S. Fish and Wildlife Service has, to our knowledge, always coordinated such Predator Management Programs with affected entities such as local governments and interested citizens group.

F3 3. Predation issues surrounding the proposed development are of major concern to the Department. It is suggested that the proponent develop building designs and development lay-out with the aid of experienced persons with knowledge of predation issues, including but not limited to: raptor perches, raptor nest sites, raptor vs. clapper rail encounters, raptor vs. least tern encounters, raptor breeding behavior as it relates to marsh bird breeding behavior and their potential conflicts; and raven interactions on marsh birds, raven foraging behavior in relation to trash and maintenance of developments. In addition, such persons should have experience in urban-adapted and domestic animals that may be drawn by the development and also have an impact on the surrounding marsh and species (i.e., dogs, cats, rodents, opossums, raccoons, skunks, etc.). Details on building design, the layout of the wetland buffer, the landscape plan, lighting, and maintenance schedule are necessary before the

F1 Comment noted.

F2 See General Responses 3.3.8.2 and 3.3.3 - 3.3.3.4.

F3 See General Responses 3.3.2.1 and 3.3.3 - 3.3.3.4.

Ms. Robin Putnam

-3-

September 21, 1990

F4 Comment noted. See Response B24.

F5 See Response B24.

Department can determine full impacts from the proposed project. Therefore, these critical issues must be discussed and effectively resolved prior to the certification of the Draft EIR.

F4 . Impacts to the State-listed Endangered Belding's Savannah Sparrow from the Proposed Project are considered significant. As shown in Figure 11, page 33 of PSBS No. 564 in Appendix C, there was a minimum of 15 pairs along the fringes of the marsh area. In the southern coastal salt marsh area within the project impacted by all of the project alternatives discussed, including Alternative 7a mentioned in comment No. 1.

In a Master's Thesis by A. White in 1986, "The Effects of Habitat Type and Disturbance on an Endangered Wetland Bird, the Belding's Savannah Sparrow", it was discovered that the sparrow would flush from its nest or roost when a person would walk within 16 to 32 meters of its location. Due to this finding, the location of the birds per Figure 11 and the results of several similar studies involving the Belding's savannah sparrow and other marsh birds the Department recommends a buffer adequate to prohibit disturbance from the activities of the proposed development. An adequate buffer arrangement might be as follows: a 100-foot natural transitional buffer from the wetlands; then possibly a passive recreation trail, and then a bike trail. Such an adequate buffer width appears to be feasible and would protect the Belding's savannah sparrow habitat, and nesting locations, thereby eliminating the potential for "take" of this endangered species. More information on the design of the open space and park uses is necessary before the Department would be able to concur on any issue relating to the buffer and development adjacent to salt marsh. Therefore, considerably more detail regarding these issues is necessary prior to certification of the draft EIR.

F6 . The drainage impacts from this proposed project are of concern to the Department and include the hydrological regime changes expected from the project; changes in the amount of fresh water during different seasons; effects of contaminants from vehicle waste, landscape chemicals, and general urban contaminants (both on and offsite); effects to the marsh from ground water pumping or pumping of brinywater from the manmade lagoons; efficiency of any grease traps installed and their maintenance, and general maintenance details relating to possible contamination effects. Details regarding drainage impacts were not disclosed in the document and need to be thoroughly discussed before either the Department or the lead agency can determine the significance of potential impacts from the Proposed Project. Therefore, this issue must be

F4 Comment noted. See Response B24.

F5 See General Response 3.2.3.5 regarding Hydrologic Regime changes. With respect to seasonal changes in the amount of fresh water, the proposed fresh water marsh would be used in conjunction with the detention/desilting basin to function as a retention facility during the dry season in order to minimize fresh water flows to the "F" & "G" Street Marsh during dry summer months.

Regarding effects of contaminants, see General Responses 3.2.1.1, 3.2.1.2, and 3.1.3.1, and Response A1.

Regarding effects to marsh from pumping, refer to General Responses 3.2.3.1 and 3.2.2.3 - 3.2.3.5.

Also a more complete evaluation of effects of pumping will be a part of the project level EIR; see General Response 3.1.1.

Regarding grease traps, refer to General Response 3.2.1.2.

Regarding drainage impacts, see General Response 3.2.1.1.

The above concerns are important issues. Additional information required for resolution beyond existing data will be addressed in the project-level EIR. Additional studies will be required to more fully evaluate the potential for changes in the hydrological regime in the salt water marsh. As noted in General Response 3.2.3.5, possibility of impacts of plant stress, and/or consolidation of the marsh sediments due to lowering of the water table due to pumping, require resolution at the project level of CEQA compliance.

September 21, 1990

-4-

properly addressed and successfully resolved prior to certification of the Draft EIR.

6. The creation of a desiltation basin was labeled "beneficial to the adjacent marsh," but the description of this basin and its effects lacks necessary detail to demonstrate its beneficial impact. Will this basin functionally handle a large storm event? What is the species planting plan? Will there be a maintenance schedule for removal of silt and vegetation? What will be the impacts (both positive and negative) to the marsh from the basin? These questions must be answered before the Department can determine both beneficial and detrimental impacts to the adjacent marsh. Again, this demonstrates that the Draft EIR is inadequate and detailed for compliance with the California Environmental Quality Act (CEQA) requirements and that these inadequacies should be corrected prior to certification of the Draft EIR.
- F7. The public health issues should be addressed in detail in the document. The most obvious of these issues from a wetland perspective is the fact that marshes are known to be breeding locations for several mosquito species that are potential nuisances or health hazards to residents or users of the proposed development. Vector control often conflicts with resource management in that spraying or draining marsh areas can result in destruction of habitat and/or nesting species, sometimes with the "take" of an endangered species at risk. The proximity of proposed uses to the Sweetwater Marsh Complex would greatly increase the likelihood of conflict between vector control and wetland management. Among San Diego County examples of this conflict include Buena Vista Lagoon, Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, Tijuana River Valley and the Tijuana Estuary. Side-effects of researched and the long-term effects of their use are unknown. The Department recommends that the proponent and the lead agency (City of Chula Vista) devise an environmentally sound Vector Control Plan that employs the most effective methods for controlling vectors of all kinds with the least environmental damage and which is reviewed and approved by the Department and U.S. Fish and Wildlife Service prior to certification of the Draft EIR. This plan should contain methods for determining a vector problem, areas of potential Vector Problems, fish and wildlife species which occur in identified potential problem areas, a determination of fish and wildlife sensitivity as a function of season so as to minimize disturbance of wildlife through vector control, chemicals and methods to be employed for treating vector problems, and an education program for residents and/or users of the development to make them aware of great potential for regular insect contact. The Department wishes to avoid

Ms. Robin Putnam

-5- September 21, 1990

- F8 Comment noted. See General Responses 3.3.7.1, 3.3.7.2 and 3.3.6.3, also see Response B3.
- F9 See General Responses 3.3.1 - 3.3.12.

habitat destruction and/or take of endangered species due to new vector control needs as a result of development in this area. This pressing issue must be thoroughly addressed and adequately resolved prior to certification of the Draft EIR.

- F8 8. There is a possibility for the isolation of the F and G Street Marsh through implementation of the proposed surrounding development. Because of the restoration potential and significant existing wildlife values of this small marsh, the Department recommends creation of wetland or wetland/upland transition habitat in the northwest area proposed for park uses. This would create an effective "link" to the adjacent San Diego Bay for birds, eliminate the isolation of F and G Street Marsh, and provide a more substantial buffer for wetland protection. The indirect impacts to the significant existing wildlife values to F and G Street Marsh which would result from project implementation must be adequately mitigated prior to certification of the Draft EIR.

- F9 9. Impacts from building height and building location, primarily in the western half of the proposed project site, are considered to be a significant impact by the Department. Figure 24 of the Avian Flight Study (PSAS No. 564) indicates that guild 3, the wading/marsh birds, utilize the northwestern portion of the project site. If development occurs in this area, an unmitigable impact to these birds will result. Additional studies regarding building design, layout, and location are needed in order to circumvent such impacts.

- F10 10. The creation of new wetland totalling not less than 13.2 acres on nearby Gunponder Point, as stated in the Draft EIR on pages 3-100 and 3-115 is potentially feasible in concept, but details are lacking in the Draft EIR. A detailed wetland creation plan including a monitoring plan and a failure contingency plan are necessary before either the Department or the lead agency can determine its feasibility. This issue must be clarified prior to certification of the Draft EIR.

- F11 11. The high number of raptor species found during the biological study indicates that the proposed project site is an important raptor foraging area and that both the wetlands and the on-site uplands are heavily used by raptors. Issues relating to increased perch availability and the effects of raptor predation on marsh birds has already been mentioned (comment No. 3); however, the elimination of raptor foraging habitat by the development is also a concern. The impacts of development on raptors are not clearly identified in the document. Will foraging on marsh birds be increased since the current upland prey base will be eliminated, or will the raptors utilizing the project site be eliminated due to the

- F8 Comment noted. See General Responses 3.3.7.1, 3.3.7.2 and 3.3.6.3, also see Response B3.
- F9 See General Responses 3.3.1 - 3.3.12.

We concur that a plan is required; however, as noted in the comment such work is feasible. Detailed plans for this work should be developed as a part of a project plan and reviewed at the project level.

- F10 See General Responses 3.3.3.3, and 3.3.4 - 3.3.4.3.

- F11 See General Responses 3.3.3.3, and 3.3.4 - 3.3.4.3.

Ms. Robin Putnam

-6- September 21, 1990

site development? Answers to questions such as these must be forthcoming if impacts to raptors (and/or increased predation on marsh birds) are to be identified and effectively mitigated consistent with CEQA requirements.

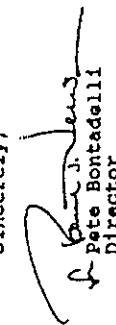
F12 12. The mitigation measures/requirements stated on pages 3-111 through 3-16 are generally inadequate and should contain a more detailed level of information and studies to ensure their adequacy. In particular, measures 1 through 6, 8 through 10, 12, 16 through 17, 19, and 26 are too generally described. These measures must be expanded and adequately described before their adequacy can be determined.

F13 In summary, and for all of those reasons indicated above, the Department recommends against certification of the Draft EIR. Issues related to predator management, drainage, endangered species impacts, wetland impacts, vector control, building height and layout, and developmental location and scope are either not discussed or are insufficiently resolved for compliance with the mandates of the CEQA. Further, several aspects of the proposed development conflict with the State and Federal Endangered Species acts. We recommend that the project be redesigned and/or reduce impacts to endangered/sensitive species and habitat to a level of non-significance. We recommend the preparation and public circulation of new environmental documentation for a new and more environmentally sound development of the project area.

The Department is willing to work with the project proponent and the City of Chula Vista in an effort to resolve our concerns while simultaneously allowing development which is compatible with the preservation of wetlands, other habitat, and sensitive species that presently exist on the National Wildlife Refuge and proposed project site.

Thank you for the opportunity to review this project. We request that a copy of the lead agency's response to our comments and a copy of the final environmental document be provided to the Department prior to filing the Notice of Determination. Any questions or comments should directed to Ms. Theresa Stewart, Wildlife Biologist, or Mr. Fred Worthley, Regional Manager, Region 5, Department of Fish and Game, 330 Golden Shore, Suite 50, Long Beach, CA 90802, or telephone at (213) 590-3113.

sincerely,

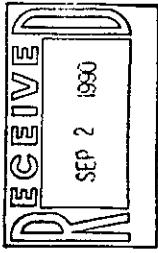


Pete Bontadelli
Director

cc: Mr. Martin Kenney - U.S. Fish and Wildlife Service,
Laguna Niguel

Ms. Debra Lee - California Coastal Commission, San Diego
Resources Agency
State Clearinghouse

Comment G



Comment G - Memorandum, Clifford L. Swanson, Deputy Public Works Director/City Engineer

G1 This comment is noted.

September 27, 1990
File No. YE-039

TO: Maryann Miller, Environmental Review Coordinator
FROM: Clifford L. Swanson, Deputy Public Works Director/City Engineer
SUBJECT: Third Review of Draft Midbayfront Local Coastal Program
LCP Resubmittal No. 8 Amendment Environmental Impact
Report 89-08 and LCP Resubmittal Specific Plan

G1 The Engineering Division has reviewed the subject documents and has no comments.

SMN:das

(A:\R\LD1\EIR89-08.DOC)

Comment H

August 27, 1990

To: Maryann Miller
Planning Department
From: Carol Gove, 
Fire Marshal
Subject: Midbayfront EIR

Chief Lopez and I have reviewed the Draft Local Coastal Program Resubmittal Specific Plan and the EIR for the Midbayfront.

H1 One area overlooked was the need for an additional Fire Inspector to handle the increased workload due to the project in terms of plan review and site inspections plus routine fire safety inspections and educational programs.

01150BL

Comment H - Carol Gove, Fire Marshall

H1 This comment is noted and included in the text of the DEIR, Volume II.

Comment I

Sweetwater Union High School District

ADMINISTRATION CENTER
1130 FIFTH AVENUE
CHULA VISTA, CALIFORNIA 92011
(619) 497-5553

PLANNING DEPARTMENT

May 31, 1990

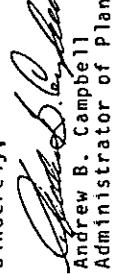
Mr. David Gustafson
Community Development Department
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

Dear Mr. Gustafson:

Re: Proposed Bayfront Project

II In reviewing our projected enrollments for the Fall of 1990, it has become apparent that the Sweetwater Union High School District will need a school site and the construction of a facility in order to house the students generated from this development.

Sincerely,


Andrew B. Campbell
Administrator of Planning

ABC:mr
cc: Mr. Leighter, Planning Department

Comment J - Sweetwater Union High School District

II This comment is noted. The text regarding schools on pp. 3-162, 3-165, and 3-167 has been revised.

Comment J

Sweetwater Union High School District

ADMINISTRATION CENTER
1130 FIFTH AVENUE
CHULA VISTA, CALIFORNIA 92201
(619) 691-5553

PLANNING DEPARTMENT

August 23, 1990

Mr. Robert Leiter
Planning Director
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

RE: Draft City of Chula Vista Mid Bayfront LCP Resubmittal
No. 8 and Environmental Impact Report

Dear Mr. Leiter:

I wish to extend my appreciation for the opportunity to review the Draft Environmental Impact Report and amended Local Coastal Plan prepared for the Chula Vista Mid Bayfront Plan. The comments contained in this letter articulate the District's concerns with the contents of the report.

J1 The project impact to secondary schools as associated with the developer's proposal (identified on Table 2-i of the report) is reported accurately. The District can anticipate a minimum of 450 new students if the project is approved at that level of development intensity.

The Mid Bayfront area is served by the Chula Vista Junior High School and the Chula Vista High School. These two facilities are operating above the permanent capacities for which they were designed. Currently, the junior high school is operating at 134% capacity, and high school is at 116%. Additionally, recent enrollment projections indicate that the District will experience an average growth rate of 1.4% for the next six years so it is unlikely that enrollment at these schools will drop in the upcoming years.

J2 The proposed mitigation measure of incorporating this project into an existing Mello-Roos community facilities special tax district, or creating a new CFD, is one step towards mitigating the impacts the project has upon the school district. However, that in of itself is not sufficient mitigation to bring the project below levels of significant impact.

Comment J - Sweetwater Union High School District

J1 These comments are noted.

J2 This comment is noted, and see Response II.

- J3 The following indicates issues which must also be addressed and resolved:
- * Transportation Costs: \$1,000,000
 - 8 busses will be required to transport students to schools outside the project area.
- J4 Annual Operating Costs: 327,290
- The state does not fund transportation operating costs.
- * Relocatable Classroom Costs (15): 1,245,000
(If students must attend school outside the project area.)
- * Permanent Classroom Costs (15): 1,512,000
(If new classrooms are to be constructed within the project area)
- J5 In the District's May 31, 1990 letter to the City, Mr. Andrew B. Campbell identified that a school site in the Mid Bayfront area is necessary. The provision of a site will mitigate the classroom issue without severely impacting nearby community schools.
- J6 The following mitigation measures will bring the project's impacts below levels of significance:
- A. Incorporate the project into a Mello-Roos Community Facilities District.
 - B. Provide compensation to cover operating costs. If a new Mello-Roos Community Facilities District is created, these costs can be identified in the CFD, and the compensation will not be necessary.
 - C. Provide a secondary school site within the project area.
- J7 These comments are noted, and impacts have been added to the DEIR.
- J8 This comment is noted.
- J9 These measures have been added to the text in the DEIR.

Mr. Robert Leiter
August 23, 1990
Page Three

Mr. Leiter. I am requesting that the Environmental Impact Report and the proposed amendment to the City's Local Coastal Plan not be approved unless the above lettered items are included as conditions of approval.

If you have any comments or questions regarding this correspondence, please feel free to call me.

Respectfully,



Thomas Silva
Director of Planning

TS:mi

cc: John Goss, City Manager
Kate Shurson, Chula Vista City Schools

Enclosure

Comment K

CHULA VISTA CITY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619-425-9600

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

JOURNAL OF EDUCATION

September 21, 1990

Mr. Bob Leiter
Planning Director
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

RE: Midbayfront Draft EIR

Dear Mr. Leiter:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the Midbayfront.

The District prepared and submitted comments on this proposal in July, 1989 (copy enclosed). The developer's proposed number of dwelling units has not changed (1,550 units). Demographic studies of multi-family developments in this area indicate a potential of up to 930 students from the 1,550 residential units. In addition, the relationship between commercial/industrial development (creation of new employment) and student generation has been clearly documented in a recent joint school district study prepared by SANDAG. Broken down by employment type, the proposed 2,666,000 square feet of commercial/professional development would yield approximately 606 additional students.

There are no existing elementary facilities to serve new children from this development. Schools in the area, and generally throughout the District, are either operating above permanent capacity or rapidly approaching capacity.

In September, the District transmitted to the City a request from the Board of Education (copy enclosed) for provision of an elementary school site within the Midbayfront Redevelopment Project. In addition, the Board requested participation in the redevelopment agency, specifically participation in the tax increment revenues realized through redevelopment, to finance new school facilities and services required to meet growth needs in the western area of the District.

K1 Following completion and review of the SANDAG Non-Residential Development and Student Enrollment Study cited above, it became clear that additional facilities will be required to serve the Midbayfront project. An elementary school is constructed to house approximately 600 students; the 1,536 students projected from this development equate to two and one-half schools. It is possible to accommodate additional children at a site through utilization of relocatable classrooms or multi-track year-round programs. However, this would be determined by the School Board, and in no event would less than two facilities be required.

Comment K - Chula Vista City School District

- K1 The additional 606 students generated by development of commercial/professional uses in the project area have been added to the 930 students already projected by the District in the July 1989 correspondence. The new amount projected by the District, 1,536 students, is reflected in the DEIR text.

09-04-023 03/08/97

September 21, 1990
Mr. Bob Leiter
Page 2
RE: Middayfront Draft EIR

K2 This comment is noted. The DEIR text has been modified to include the new recommendations from the District as stated in the comment letter.

K2 The DEIR (page 3-171) correctly finds that approval of this project would have significant impacts on the District's ability to adequately serve the needs of the students. In addition, the City's Threshold for Schools would not be met. The "Mitigation" section of the EIR does not propose adequate mitigation for these impacts.

K3 As stated above, the District requires sites and financing for two and one-half new elementary schools in order to serve these children. Site criteria call for ten net usable acres for a school housing 500 students. Sites must also meet other District and State criteria. In addition to providing sites, financing for the new required facilities must also be assured. This could be provided through formation of or annexation to a Mello-Roos Community Facilities District (CFD) or other form of alternative financing.

If you have any questions, please contact me.

Sincerely,



Kate Shurson
Director of Planning

KS:dp

cc: John Linn
Bill Barkett
Tom Silva
Jack Matlock

Comment L
CHULA VISTA CITY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619 425-9800.

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH



Comment L - Chula Vista City School District

This comment letter was received as a response to the Notice of Preparation for this project, and information requested by these comments were included in the Draft EIR.

BOARD OF EDUCATION

July 13, 1989

JUL 13 1989

Mr. Doug Reid

Environmental Review Coordinator

City of Chula Vista

276 Fourth Avenue

Chula Vista, CA 92010

RE: Notice of Preparation of a Draft Environmental Impact

Report (DEIR) for Midbayfront Subarea

Case No: EIR-89-8

Applicant: Chula Vista Investors/William J. Bartlett

Dear Mr. Reid:

Thank you for the opportunity to review and comment on the Notice of Preparation of a DEIR for the Midbayfront Subarea.

Section 3.0 - Impact Analysis, lists subsections that will be fully analyzed in the DEIR. While it may be the intention to include provision of school facilities under Section 3.20 - Utilities, we want to be assured that a complete evaluation of project impacts on schools be prepared since schools in this area are currently so heavily impacted.

Section 4.0 - Attachment A-6, Preliminary Contents of EIR, does not include a discussion of this project's compliance with the City of Chula Vista's Threshold Standards Policy for Schools. We ask that this be part of the analysis.

The project alternatives under consideration include residential development ranging from 750 - 1550 apartment units. Recent demographic studies indicate multi family units generate students at a significantly higher rate than other types of housing, with a potential range of from 450 - 930 children.

As the City is aware, elementary schools on the west side of town, from Second Avenue to the Bay, are experiencing severe overcrowding. Demographic studies indicate that changing population trends and patterns, higher densities, redevelopment and infill have contributed to this situation and are expected to continue. Projections show the schools which would be impacted by this proposed development, Feaster and Vista Square to be at or over capacity for school year 1989/90. Additional children generated from development of the Midbayfront area would exacerbate this situation.

July 13, 1989
Mr. Doug Reid
Page -2

Given that growth in this area of town is expected to continue, and that existing facilities cannot accommodate these students, the District is considering acquiring an additional site for construction of a new school in the northwest portion of Chula Vista. The Board of Education has indicated a strong desire to work cooperatively with the City in accommodating growth in the western portion of town while maintaining a high quality education for all students.

Thank you for the opportunity to comment on this important proposal. If you have any questions, please contact my office.

Sincerely,

Kate Shurson
Kate Shurson
Director of Planning

KS:dp

cc: Tom Silva, Sweetwater School District

Comment M



CHULA VISTA CITY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619 425-9800

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

RE: EDUCATION

PHILIP C. GRIFFITHS, Ph.D.
SHARON GILES
MARK A. JARDI
DR. SCOTT LEISNER
MARK A. MARTINHO

PERINTENDENT

AT T. McCAHAN, S.A.O. September 11, 1989

The Honorable Gregory Cox
Mayor of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92010

Dear Mayor Cox:

RE: SCHOOL SITE IN THE MIDBAYFRONT

At its September 5, 1989, meeting, the Chula Vista City School District Board of Education unanimously voted to request that the City of Chula Vista include provision of an elementary school site in its Midbayfront Redevelopment Project.

In addition to providing a site, the Board also requested participation in the redevelopment agency, specifically participation in the tax increment revenues realized through redevelopment. These revenues would be utilized for construction of school facilities and/or provision of school services required to meet the growth needs in the western area of the District.

I would appreciate meeting with you or a designated member of your staff to initiate discussions on this subject. The District is looking forward to working with the City to assure that adequate educational facilities and services are available for all residents of Chula Vista.

I am looking forward to hearing from you.

Sincerely,

John E. Linn
Assistant Superintendent
for Business Management

JEL:ca

Comment M - Chula Vista City School District

This comment was a previous submittal to the Mayor at the time, and its content is noted.

87-44-0235 03/01/91

Comment N

RECEIVED 457 Delaware Street
Imperial Beach, CA 92032
Sept. 17, 1990
90 SEP 18 #1220

City of Chula Vista Planning Commission
c/o Environmental SHY/PLA/ML/Coordinator
P O Box 1087 CITY CLERK'S OFFICE
Chula Vista, CA 92102

Dear Planning Commission members:

This letter is written to comment on the DRAFT City of Chula Vista Midbayfront LCP resubmittal No. 8 Amendment, Environmental Impact Report.

Many impacts of the proposed action are described.
N1 Unfortunately, Cumulative Impacts, in Section 9, are grossly and disasterously under-estimated.

N2 The proposed action obviously impacts the natural and biological resources of San Diego Bay, particularly the South Bay. So do the following proposed projects:

i. A development, similar to this proposal, at the Port District National City Marine terminal (p. 4-5 of this E.I.R.)

2. The McCormick-Hallvest proposal for boat manufacturing with a launch ramp into the Sweetwater Flood Control Channel at the old ITT plant in National City.

3. Developer Bartlett's proposal for a marina in National City between Pepper Park and Paradise Creek marsh.

4. South Bay Boat yard expansion,

of "G" Street, which is just south of the South Bay Boatyard, shore from "J" to "J" Streets in Chula Vista.

6. A shelter/harbor island type development just offshore in Chula Vista.

7. Commercial/residential development of privately owned salt pond lands.

Page 1 of 5

7-17-90

Comment N - Save Our Bay, Inc.

- | | |
|----|---|
| N1 | See General Response 3.1.2. The cumulative impact discussion has been expanded in the DEIR, Volume II, Section 9.0. |
| N2 | See General Response 3.1.2 and DEIR, Volume II, Section 9.0. |

8. Imperial Beach (IB) marina along the north edge of the Otay River opposite the IB city shops with a channel dredged thereto.
- N3 See General Response 3.1.2 and DEIR, Volume II, Section 9.0.
9. Residential/commercial development of the RV park south of the most southwestern salt pond along Highway 75.
- N4 See General Response 3.1.2 and DEIR, Volume II, Section 9.0.
10. 2nd Harbor Entrance
- N5 This comment is noted. Also, see Response CC5.
11. Crown Isle hotel
- N6 Comment noted. However, the type of geotechnical and soils constraints found on the site are typically mitigated through engineering design and mitigation measures. These issues will be addressed further in the project-level EIR. (See General Response 3.2.1).
12. Bay side development of Silver Strand State Park
- N7 Refer to General Response 3.2.1.2. All storm drains outletting either directly into the bay or into the detention/desilting basin will first flow into a three-chambered "Water Quality Control Structure."
13. Coronado yacht club slip expansion
- N8 Until the cumulative impacts of at least the above thirteen proposals have been considered, the Midbayfront E.I.R. cannot be considered acceptably complete.
- N9 And cumulative impacts analysis must take into account the finally released (by the San Diego Unified Port District and California State Coastal Conservancy) South San Diego Bay Enhancement Plan, particularly Volume III, which explains that further development impacts cannot be mitigated in South San Diego Bay.
- N10 In the semi-desert area of coastal southern California, a development featuring water, even an artificial salt water lagoon, as its centerpiece is highly inappropriate. Numerous problems and environmental impacts of the proposed midbay-front project could be eliminated by featuring drought resistant native coastal flora and fauna habitat which is in extremely short supply in this area.
- N11 Specific comments by page (p.) and paragraph (para.), counting partial paragraphs, follow.
- p. 3-7, para 2: The 10-acre salt water lagoon "would be presumably revetted." The environmental assessment of the lagoon cannot be assessed until this question is answered.
- N12 p. 3-10, para 1: The report says: "The report says: "Detailed site and engineering design, and detailed soils and geo-technical studies must be prepared by a soils engineer for address of site constraints." Until the designs and studies are done, environmental assessment is not possible. Indeed, the proposed project and alternatives may not be feasible.
- N13 p. 3-16, para 1: The report says "In storm drains, presumably with oil and grease traps, - - - the presence or

absence of oil and grease traps must be known before environmental assessment is possible.

p. 3-19, para 1: The report says "a baffle and two stilling blocks which presumably would trap sediment, grease and oil." If we must assume, we cannot know the environmental impacts of the project.

N8 p. 3-19, para 4: If as seems likely, ground water for the lagoon is contaminated with chlorinated hydrocarbons, including trichloro ethene, the lagoon should not be constructed, or an impact assessment of using bay water (p. 3-21, para 5) must be made.

N9 p. 3-24, Visual Aesthetics/Community Character
The subject of views from I-5 and city streets is mentioned so often and analyzed in such depth that it must be pointed out that people driving cars on a crowded high speed freeway and busy urban streets should attend to their driving, not ANY available views.

N10 p. 3-32, para 4: It is my understanding that the "Dilapidated agricultural structures have been removed by the City of Chula Vista.

N11 p. 3-60, para penultimate: Until it can be shown how/where "concurrent emissions reductions elsewhere within the air basin" can be done, the project is not feasible.

N12 p. 3-76, para 3: The report says: "fish were not systematically sampled." It is likely that the San Diego Unified Port District's finally released South San Diego Bay Enhancement Plan (SSDBEP) can successfully serve as reference for the Final E.I.R. The SSDBEP is the most exhaustive and intensive study of South Bay habitats and native inhabitants done to date.

N13 Volume One specifically deals with benthic marine invertebrates, plankton and nekton, fishes and sea turtles.

N14 Fig. 2-VI: There must be a reason why several use areas, particularly those of building's Savannah Sparrow and Wandering Skipper butterfly, are found immediately outside but almost none within the project site.

N15 p. 3-30, para 3: "Due to the high value of these (coastal wetlands) systems and the rapid losses they have under-

N8 Refer to General Responses 3.2.3 and 3.2.3.1 (Water Quality and Water Treatment and Monitoring). Contaminants have been found by Woodward-Clyde Consultants (WCC) in the groundwater below adjacent properties, approximately 1,500 feet from the location of the proposed well field. Water quality testing performed by GEC did not indicate any detectable levels of contaminants exist in the groundwater at the Midbayfront site.

N9 This comment is noted.

N10 This understanding is partially correct; the structures were removed by the property owner, Chula Vista Investors, since the Draft EIR analysis was prepared.

N11 This comment implies that no land use development (growth) may occur anywhere in San Diego County unless concurrent emissions reductions are provided. The air quality planning process does not contain any such prohibition. It is obviously highly desirable that any growth be able to provide such off-sets to neutralize the air pollution emissions from development-related traffic, but, realistically, the offset process is not really practical for general growth as proposed for the Midbayfront project site. Growth-related developments currently do not have access to any regional emissions reductions programs which could require concurrent emissions reductions elsewhere in the air basin. In addition, it can be assumed that if the proposed development did not occur at the Midbayfront site, it (or a similar project) could occur elsewhere in the local area with the same set of vehicular emissions. It is therefore not a correct supposition to assume that any air quality impacts from implementation of the proposed project would simply disappear for the "no project" alternative as suggested by this comment.

N12 Comment noted. This long awaited document has been reviewed relative to the resources of the Chula Vista bayfront. The DEIR preparation has considered and made use of this reference as appropriate.

N13 The reason for this distribution of sensitive species is the distribution of their habitat.

N14 Comment noted.

- gone, almost any impacts to these systems would be considered significant." should have under-scoring as just shown.
- N15 p. 3-81, para 3: Eelgrass beds are reportedly expanding in San Diego Bay probably due to the four year drought which has reduced run-off which carries fertilizers and sediment, both of which decrease water clarity. When normal rainfall returns and bay waters become once again more cloudy, eelgrass beds will shrink in size.
- N16 p. 3-87, para 1: Where will the 14.2 acre loss in the F & G street marsh and 49.8 acre loss of the E street/Vener Pond/Sweetwater marshes be mitigated?
- N17 p. 3-89, para 1: " - irrigation runoff "
- N18 could best be controlled by using only native, drought resistant species for landscaping.
- N19 p. 3-89, para 3: The report says "At this time not enough information is available to analyze this issue as it relates to biological resources." The project, cannot, therefore be considered until enough information is available.
- N20 p. 3-90, para 2: This problem could also be alleviated by using native, drought resistant species in landscaping.
- N21 p. 3-91, para 4: Without an estimate of the potential for contaminant discharge, the project cannot proceed.
- N22 p. 3-94, para 4: How is the word "conserved" used here?
- N23 p. 3-96, para 2, 3: Prohibition of ownership of dogs and cats by residents of and visitors to the project could largely solve the problem.
- N24 p. 3-96, para 4: " water front approaches by boats and jet skis" can be stopped if the San Diego Unified Port District enforces the existing 5 mph speed limit and confines water sports to existing Chula Vista marina and Coronado Cays dredged channels.
- N25 p. 3-112, 5. b.: If mudflats and eelgrass beds are to be converted from uplands, what will be done to replace the uplands so converted? These near-shore uplands are also extremely valuable habitat. It is here that Belding's savannah sparrows nest.

N15 Comment noted.

N16 The commentator has misinterpreted the meaning of the table. This table discusses changes in watershed acreages in various drainage basins and not changes in wetland habitat areas.

N17 Comment noted. See Response B38.

N18 See General Response 3.2.3 - 3.2.3.5.

N19 See Response B38.

N20 Refer to General Responses 3.1.1, 3.2.1.1, 3.2.1.2 and Letter Response A1.

N21 "Conserved" as used in this sentence refers to characteristics strongly maintained between groups. Text changes have been made in Volume II.

N22 This comment is noted. Also, see biological mitigation measures # 13, 14 and 16 in the DEIR, Vol. II.

N23 See Response B41.

N24 Uplands are not typically utilized for nesting by Belding's Savannah Sparrows; rather, Belding's Savannah Sparrows nest in middle and high marsh areas. However, it is certainly worth note that upland habitats do have intrinsic values of their own. At the bayfront these are primarily important as raptor foraging areas. Losses of substantial portions of these uplands due to the project will result in significant adverse impacts to raptors.

N25 p. 3-112, Requirements: It should be emphasized that converting one kind of valuable habitat into another requires mitigation for the habitat which was converted into the other.

N26 p. 3-115, 20: If dredging, marinas, water sports courses, etc. should not be allowed along the bay front at this project, they should not be allowed along the bayfront anywhere, including the proposed nautical activity center at the foot of "G" Street.

N27 p. 3-115, 22: Raptor nesting could be mostly eliminated from landscaping materials if these were required to be native drought resistant plants or low stature.

N28 to the County is necessary, one way or another, and surely it is feasible if Redevelopment law were to be changed as is possible in a participating democracy.

N29 Chula Vista Nature Interpretive Center, disruptive as it would be to wildlife in the Refuge, requires an E.I.R. When will this E.I.R. be done?

N30 p. 3-156, Public Access: The parking shortage must be dealt with before an E.I.R. can be acceptable.

N31 p. 3-160, para 2: Areas to the west and the north are so nearly equally sensitive, that a distinction should not be drawn and protection of the "open space" should be maximized along both boundaries.

N32 is the project feasible?

N33 controlled, thereby making Alternative i acceptable. Environmentally sensitive public access to the bay front could be improved.

N34 Dairy Mart road, south of 1-5, should be shown.

I appreciate the opportunity to present these comments.

N25 The mitigation of wetland losses through removal of uplands would result in creation of higher ecological value habitat at the expense of habitats of lower ecological value. Clearly there are some uplands which should not be traded off in this manner. However, the uplands proposed for wetland creation generally have low importance relative to the wetlands that may be created from these areas.

N26 This comment is noted, and is not relevant to the adequacy of this EIR.

N27 Comment noted. We concur and such materials have been required for buffer areas bordering wetland habitats.

N28 In response to the first part of this comment which states that "surely mitigation of revenue loss to the County is necessary," it should be clarified that there will be no loss of revenue to the County. The County will continue to receive the property taxes from the project area based on the amount of tax revenue that the County received the year that the bayfront project area was established, only the property taxes on the incremental increase in property value, which will result from project development, will go to the City's Redevelopment Agency.

Regarding the second part of this comment, "surely it is feasible if Redevelopment law were to be changed as is possible in a participating democracy", the comment is noted.

N29 The DEIR references two parks in the study area, one of which is a Special Purpose park where the Chula Vista Nature Interpretive Center is located at the east end of Gunpowder Point. That reference is to the Nature Interpretive Center itself, and the surrounding property. If additional park development is proposed adjacent to the Nature Interpretive Center facility, additional environmental review will be required at that time.

N30 As stated in the DEIR (Volume II, Section 3.1.2), the City must establish appropriate parking standards for this area, and the applicant must provide the required amount of parking. This detail would be part of a project-level EIR.

N31 Comment noted.

N32 It is ultimately the responsibility of the Chula Vista City Council to determine the feasibility of any proposed project.

It should be noted that the DEIR contains various land use alternatives with different levels of development intensities for the Midbayfront site. Thus, the City has a range of development options and associated impacts to review.

N33 This comment is noted.

N34 Comment noted. Figure 4-VI has been revised to show the ponds in the vicinity of Dairy Mart Road.



Comment O

Citizens Coordinate
for
Century 3
1549 El Prado, Rm. 4
San Diego, CA 92101
Tel: (619) 232-7196

Comment O - Citizens Coordinate for Century 3

- O1 The Draft EIR environmental analyses considered the on-site cumulative effects of the project and the project's contribution to regional environmental impacts. The cumulative impact discussion has been expanded in the DEIR, Volume II, Section 9.0 to describe the regional projects proposed in the South Bay Region and to explain how each environmental analysis considered cumulative issues in the assessment.

September 26, 1990

Planning Commission
City of Chula Vista
276 4th Avenue
Chula Vista, CA 92010

Subject: Draft EIR, Mid-Bay Front LCP Resubmitted
#8 Amendment

Commissioners:

Daniel Allen
Wayne Buss
Nico Cavazos
Susan A. Carter
Jim Catworth
Judith Collins
Diane Barlow Coombs
Charles Cooper
Bruce Dummitt
Emily Durbin
Lois Fong-Schulz
Monte Griffin
Bob Hartman
James Hubbell
Michael Jenkins
Elmer Keen
Marie Kobak
Carol Landman
Bob Leffler
Angela Leita
Marc Bunte Lia
Fred Marks
Linda Michael
Kumbul Moore
Kathy N. Schwartz
Philip R. Hyde
Dunham Reilly
Roger Reville
Karen Sandbrough
Max Schmidt
Andrew Spurlock
Judy Swink
Joyce Urban
Connie Willens
Don Wood

C-3 is a 29 year old organization which researches and takes positions on specific regional planning issues. Our members have looked with pride to the leadership that Chula Vista has provided in planning for the future of our region.

O1 Citizens Coordinate urges the Commission to reject this draft EIR because the report does not include the cumulative impacts of the 12-20 bay projects now on the table in Chula Vista, Imperial Beach, National City, Coronado and San Diego.

C-3 respectfully requests that the City of Chula Vista call for a prompt update of the Master Development Plan for San Diego Bay as the vehicle to assess these cumulative environmental impacts on the Bay. Until that assessment is done for the Bay we urge the City to delay submission of a Master Plan Amendment for the Mid-Bay Front Project.

Respectfully,

Judith M. Collins
Judith M. Collins
San Diego Bay Committee

Comment P

September 26, 1990

From: BAY USERS GROUP OF SAN DIEGO
P. O. Box 18-1464
Coronado, CA 92118

To: City of Chula Vista
Planning Commission
276 4th Avenue
Chula Vista, CA 92101

Subj: Draft EIR
Mid-Bay Front LCP Resubmitted #8 Amendment

P1 1. Thank you for the opportunity to comment on this draft document for the Chula Vista Bayfront. Bay Users Group is a volunteer, not-for-profit group created in 1987 to research facts and issues regarding San Diego Bay Planning Policy. B.U.G. has followed with interest the progress of the Mid-Bay Front Project for the last two years.

2. Bay Users Group urges the Commission to reject the Draft EIR because it is incomplete. The current report treats the environmental impacts of this project as if the project stands alone. The proposed height and density of the development alone is bound to further diminish the use of this area by local wildlife as well as the birds of the Pacific Flyway.

P2 3. Bay Users urges the Commission to assess the total impacts on the bay of the 13 and more other proposed projects which are listed in the consultant's report for the proposed South Bay Nautical Activities Center.

To evaluate this project independent of the others makes as much sense as approving one line of a budget without adding up the total spending in the budget.

Please insist on a tally of the environmental costs for the total South Bay budget before taking action on this big budget item. Until then we earnestly recommend that the draft EIR not be accepted and no Master Plan Amendment be proposed. As a member city of the San Diego Unified Port District, it would be appropriate for Chula Vista to call on the Port to promptly provide an updated Port Regional Master Plan and use that as the format for assessing the cumulative impacts of this project and the others.

Respectfully,

Judith Collins
Judith Collins, President
Bay Users Group of San Diego

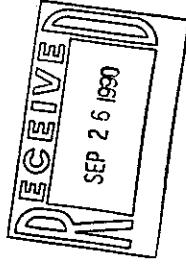
Comment P - Bay Users Group of San Diego

- P1 Comment acknowledged. The cumulative impacts of the proposed project and other projects in the San Diego Bay region are discussed in the DEIR, Volume II, Section 9.0.
- P2 The cumulative impact discussion has been expanded in the DEIR, Volume II, Section 9.0.

89-04-028 03/08/91

Comment Q

Elizabeth Copper
227 F Avenue
Coronado, CA 92118



24 September 1990

Planning Department
City of Chula Vista
276 Fourth Avenue
Chula Vista, California 92101

RE: Draft City of Chula Vista Midbayfront LCP Resubmittal No. 8 Environmental Impact Report
(DEIR)

I am a biologist who has worked with birds in south San Diego Bay since 1976.

The Chula Vista Midbayfront combined with adjacent National Wildlife Refuge properties and other undeveloped properties in south San Diego Bay is one of the richest areas for wetland birds in the state and a resource of national importance. It appears that the proposed project will result in significant impacts to the avifauna of south San Diego Bay. While development of the uplands of the Chula Vista midbayfront will inevitably occur the original LCP described a development considerably more sensitive to the resources than the current proposed project.

Q1 The height and density of the buildings will clearly interfere with existing bird use particularly the waterfowl and wading birds and raptors. While these groups may not be as subject to collision with buildings as are the small passerines the disruption of their flight patterns and in the case of the raptors loss of foraging habitat can only be regarded as a negative impact. The document states that the impacts to these groups will be negligible but shows that more than five percent of the wading birds were observed in areas and at elevations of potential impact.

The building height and placement will potentially result in their use as predator perches for birds of prey such as the American Kestrel and Peregrine Falcon. The former species is among the most abundant raptors in the area and has been documented on multiple occasions preying on the endangered California Least Tern. The Peregrine Falcon in recent years has been documented as preying on the Least Tern as well and can be expected to increase as a predator in this area as a result of local hacking programs and local nesting. Shorebirds and waterfowl are also potential prey for the Peregrine Falcon. The elimination of almost all the foraging habitat for the these and other birds of prey such as the Northern Harrier is likely to put additional predator pressures on areas such as the D Street Fill, the Sweetwater marsh and the Chula Vista Wildlife Reserve where both Least Terns and the Snowy Plover have nested; the Snowy Plover has been proposed for listing as threatened, but in San Diego County at least is clearly endangered. Northern Harriers have been documented preying on both tern and plover eggs

Comment O - Elizabeth Copper

Q1 With respect to flight pattern impacts, see General Response 3.3.1.1 and pp. 63-65; Flight Study, DEIR Appendix C, Section II. As is indicated in the avian study document, waterbird flights strongly followed wetland areas, and flights over the uplands tended to be extremely limited -- principally cutting corners over peninsulas. Such flight paths were apparently taken as a matter of convenience rather than necessity. For this reason, the loss or modification of these "shortcuts" is not expected to result in significant impacts to these birds.

Relative to predator use of structures, please refer to General Responses 3.3.3. - 3.3.3.3. With respect to mammalian predators see General Response 3.3.3.4.

and chicks and have become an increasing predator problem throughout the state. The Northern Harrier is itself a species which has exhibited a dramatic population decline with the Sweetwater National Wildlife Refuge being one of the few remaining nesting areas for the species in coastal southern California.

Development adjacent to natural areas increases predator pressures both from domestic pets and various predators well-adapted to human presence such as rats and Common Ravens. The magnitude of these problems is likely to be proportional to the density of development.

Q2 The effects of lighting from the proposed project may be significant in enhancing predator effectiveness and discouraging bird use. The effects of lighting on natural areas are poorly documented and need to be addressed in greater detail as part of this project.

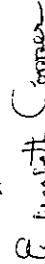
Q3 The results of the South San Diego Bay Enhancement Plan indicate that the bird use along the midbayfront is unique which may be in part attributable to the sediment composition along the midbayfront. Any alteration of the existing sediment composition may displace species such as the Short-billed Dowitcher which is recorded in notably high numbers in this area. The expanse of uninterrupted mudflat shoreline occurs nowhere else on the bay and may also contribute to the unique composition of the avianfauna recorded here.

Q4 It appears from surveys conducted for the original Bayfront plan, for this project, and for the South San Diego Bay Enhancement Plan that various parts of the Sweetwater National Wildlife Refuge and midbayfront serve as high tide refugia for some of the South Bay's shorebird population. These birds are particularly vulnerable to predation at high tide when they are confined to rather small areas primarily in the more interior parts of the shoreline. The proximity of large-scale dense development immediately adjacent to these areas is of great concern. These areas should be identified as part of the documentation for this project and potential impacts to the refugia from tall-buildings, increased predation potential and increased lighting need to be discussed.

The Sweetwater National Wildlife Refuge and other wetland resources in south San Diego Bay are unique and represent a great opportunity for the cities of the South Bay. This project is, however, grossly insensitive to those resources and does a disservice to the City of Chula Vista.

Thank you for the opportunity to comment.

Sincerely,



Elizabeth Copper

Comment R
WILLIAM J. ROBENS

September 19, 1990

R E C E I V E D
SEP 20 1990
Community Development Dept.
Ref: Bayfront EIR

Chairperson and Commissioners:

I found the EIR to be factual and generally well-written. There are thirty-one (31) "significant and not mitigable" impacts described in the impact matrix. I agree with the conclusions reached for each of those impacts. In addition there are areas of disagreement, questions, and/or suggestions; these areas are discussed below.

3.1 GEOLOGY/SOILS/GROUNDWATER and
3.2 HYDROLOGY/WATER QUALITY

R1 P. 3-13 The concluding paragraph in this section states "In the absence of site specific grading plans and geotechnical studies, it is not possible to conclude that grading, drainage, geotechnical impacts and seismic risk can be mitigated to a lesser than significant level. Therefore, these potential impacts remain significant."

An almost identical concluding paragraph concerning hydrology and water quality is on p. 3-25.

R2 One might infer from those statements (because it is often the case on smaller and less complex projects), that with completed plans and studies, impacts would indeed be mitigated to less than significant. Nothing could be further from the truth. The fact is that the potential for serious problems exists on so many forms that the project as envisioned might itself be infeasible. I recommend therefore that the first sentence in the concluding statement Section 3.1 be changed as follows:

"In the absence of site specific grading plans and geotechnical studies it is not possible to conclude that the project as envisioned is feasible, nor that grading, drainage...arevel."

A similar statement should be inserted for Section 3.2.

R3 In addition, I have some real concerns with the lagoons which have not been answered by the EIR. First, how deep are they? Without knowing the depth, one cannot determine their impact. How will they interface with the groundwater? If wells

Comment R - Sierra Club, San Diego Chapter, South Bay Group

R1 Grading, geotechnical impacts (e.g., ground settlement), drainage, and seismic risk all present potentially significant impacts. Feasible mitigation measures are clearly available from standard engineering practice for potential grading and geotechnical impacts. These impacts are therefore considered potentially significant, but mitigable. Seismic risk and site drainage concerns require additional studies to determine actual impact significance and mitigation feasibility, and are thus considered significant and not mitigated at the plan level. Refer to Table 6.1 in the DEIR, Volume I.

R2 See Response R1.

R3 Refer to General Response 3.2.2.1. The proposed depths are 8 feet for the public central lagoon, and 6 feet for the semi-public residential lake.

Refer to General Responses 3.2.2.1, 3.2.2.2, and 3.2.3.9 for information regarding interface with groundwater.

Refer to General Response 3.2.3.1, regarding well water quality.

Refer to General Responses 3.2.3, 3.2.3.5 and 3.2.3.6 regarding effects on water supply. It should be noted that these impacts have not been linked to activities by Rohr Industries.

With respect to the maintenance of lagoon bottoms, current plans propose that the lakes will be lined with a compacted clay soil layer, with a minimum 1-foot thickness. This is to be covered with a 6-inch layer of soil cement to provide a hard, cleanable (by vacuum or dredging) surface which also inhibits rooted aquatic vegetation.

80-0036 09/17/91

WILLIAM J. ROBENS

are used to fill and maintain the lagoon (8 wells on the property are proposed), what is the quality of water from the wells? How has Rohr Industries affected the water supply? How will the lagoon bottoms be maintained? How will groundwater be affected over the long term? EIRs are supposed to answer these questions. I recommend that the lagoon issue be addressed much more fully at the EIR stage.

3.3 VISUAL AESTHETICS/COMMUNITY CHARACTER

R4 p. 3-33 The views from KOP No. 2 for the proposed project are considered not significant in the EIR. I disagree. As can be seen from Plate 4, fine views of a significant portion of the Bay, Ft. Loma, and downtown San Diego are obliterated by the massiveness of the proposed project. These views, which are ignored in the narrative should be discussed and the impact changed to significant.

R5 p. 3-37 The EIR asserts that visual impacts to bayside views from KOP No. 5 are not significant since a view corridor is maintained. As can be seen on plate 12 a tiny view corridor only is maintained which is significantly less than exists today. This section needs to be re-worded to reflect the significant loss of view.

R6 p. 3-44 Last paragraph, third sentence. The EIR says that as visual mitigation, that high rise hotel(s) should not exceed 12 stories. Why 12? Where did that number come from? Why not 8 stories – the height of the hotel in the LCP? The EIR should be changed to indicate hotel height of 8 stories – or no number should be used at all.

3.7 BIOLOGY

R7 p. 3-89 In the first full paragraph the EIR states that the loss or reduction of freshwater input into the wetlands will likely lead to a gradual shift in the marshland structure and that this shift could lead to major disruptions of the system and the eventual collapse of major system links. It further states that increases in freshwater inputs can also be detrimental and that the extent of impacts cannot be estimated with a high degree of accuracy. Then, on p. 3-89 a directly contrary conclusion is drawn. "Based on the information at hand, impacts of increased freshwater discharge are considered significant and mitigable?" Even with the mitigation discussed later, the conclusion appears inappropriate.

R8 p. 3-89 The first paragraph under "Contaminant Discharge" indicates that not enough information is available to analyze this issue as it relates to biological resources. It is appropriately concluded that the impact is significant and unmitigable. It should also be stated in this section that the impacts will increase with the intensity of the development. For example, the impacts resulting from the proposed project

R4 Impacts to existing views of downtown San Diego and the San Diego Bay are reported on Pg. 3-30 of Volume II. While a view corridor will remain, it is acknowledged that the panoramic quality of existing views will be lost. Impacts are considered adverse, but not significant, however, since partial views to the bay will remain with project development.

R5 The view corridor will be somewhat greater than shown on Plate #12 to travelers along "E" Street. Impacts are considered adverse, but not significant for the same reasons as noted above in response R4.

R6 The existing LCP allowed for a 12-story hotel on Gunpowder Point, if exceptional design and site planning was incorporated into the project. The construction of 12-story structures with similar design stipulations is thus considered to be consistent with the intent of the existing LCP.

R7 It should be noted that the discussions on pg. 3-88 of the August 1, 1990 DEIR discuss general effects of increasing or decreasing the amount of freshwater input relative to the "F" & "G" Street Marsh system without benefit of any mitigation measures. Discussions on pg. 3-89 consider the issue to be significant but mitigate through implementation of a variety of measures incorporated to address these concerns (see General Response 3.2.1). The discussion on pp. 3-77 through 3-79 of Volume II has also been expanded.

R8 We disagree, contaminant discharge is not necessarily directly correlated with intensity of development. A more meaningful analysis may be made based on the extent of hard surfaces relative to natural or landscaped ground, types of landscaping and landscaping practices, and the types of land uses present in the area. Intensity of contaminant discharge with the exception of increasing the amount of road usage and thus the amount of petroleum residues on road surfaces. To address these concerns, the project applicant has provided design standards for the preparation of a plan to reduce potential adverse effects on water quality. Specific design criteria are lacking in some instances and will need to be addressed at the project level.

WILLIAM J. ROBENS

project with more visible open space.

3.13 UTILITY SERVICE

R15 P. 3-162 Energy. There is a major energy issue in the United States. It's presence has been made more notable by the Gulf Crisis, but it has existed for years. The project seems to rely on the City policies for energy conservation which were adopted in 1978 and which have been generally ignored since 1980.

The proposed project will be a large energy consumer. Without an energy plan it is likely that the intensively commercial plan will use energy inefficiently.

R16 A comprehensive energy plan must be an integral part of the project. The energy issue is not adequately addressed by the project nor in the EIR. Everybody needs to go back to square one.

R17 P. 3-168 Fire. I am not at all comfortable with the fire discussion. The intensity of the development and the height of the buildings is unprecedented in Chula Vista. What size ladder truck is needed for the development? What other special equipment is needed? How much additional training will be needed? These issues are not addressed.

R18 P. 3-170 Water. With water rationing occurring right now in the City it is no longer sufficient to automatically say that a water authority can/will supply the water needed. A more complete discussion is needed before impact can be determined.

R19 P. 3-166 and P. 3-174 Schools. The EIR identifies a major impact to the school system. The total mitigation is a Mello-Roos Community Facilities District (CFD). Yet no information is presented as to how it will work. They have often been controversial in the past, with many residents objecting to the on-going taxes, even if beforehand warned. Will existing Chula Vista residents be a part of the district? Will it be politically feasible to form a district?

R20 A plan for the development of a Mello-Roos CFD needs to be a part of the project proposal. The plan should be complete enough so that it can be analyzed for feasibility. Without it the school impacts should be considered significant and unmitigable.

3.14 TRANSFORTATION/ACCESS

R21 i. I found this section very difficult to follow and analyze. Some very important information has been omitted such as the trip distribution assumptions and land use trip generation values. I read some paragraphs several times trying to understand what was said - and still was unsure.

WILLIAM J. ROBENS

will clearly be greater than the impacts resulting from the LCP, because it is a much more intensely developed project.

R9 P. 3-93 It is indicated at the top of the page that sediment accretion and erosion may be mitigated through activities listed later in the chapter. There are nine (9) such items required for mitigation. Some of them require long term and persistent monitoring and enforcement. The probability of the monitoring and enforcement being satisfactorily maintained is questionable. The EIR should address the difficulty in ensuring that all of the mitigation measures are complied with forever. Long term mitigation is unlikely and should be so noted.

R10 P. 3-97 Human/pet presence impacts are potentially severe and basically not mitigable for the reasons mentioned directly above. Barriers are needed. Enforcement is needed. In fairness to better understanding for the decision makers, perhaps there needs to be another category better defining the impacts and mitigation likelihood:

"Significant and mitigable, but mitigation unlikely."

This definition would work for some other impacts as well.

R11 P. 3-105 The impacts on the California Least Tern should be changed to significant and unmitigable. Too many things have to go right to not have a significant effect on the Least Tern. It is an endangered species. Too much is at risk. The EIR conclusion is not realistic.

R12 P. 3-110 The LCP, a much less dense project, would be expected to have less run-off problems, less pet problems, etc., and therefore a decreased probability of significant impact than the proposed plan. The second sentence for Alternative 2 should be revised to reflect this.

R13 P. 3-116 The first paragraph under "Analysis of Significance" is weak and misleading. Several comments above apply. It should clearly state that satisfactorily enacting and enforcing the mitigation measures is a monumental task and very difficult to carry out over the long run. A re-write is in order.

3.12 PARKS, RECREATION AND OPEN SPACE

R14 3-156 Public access. An impact discussed but not evaluated is the fact that the imminency of the project, the "wall of buildings" referred to in an earlier section, and the limited bay and park views, discourages the public from entering and enjoying the parks and open space. The inviting atmosphere to the general public is a major issue. It should be found to be a significant and unmitigable impact for the proposed project. Mitigation would require redesign to a much less dense

- R9 Comment noted. It is well recognized that long-term mitigation is difficult to implement and difficult to enforce. For this reason, it is important to have a full-time staff to implement various mitigation programs and monitor the activities of those responsible for other programs. This staff should be funded in perpetuity.
- R10 Comment noted. See Response to R9.
- R11 Comment noted. It should be remembered that the project is compared to a baseline condition as it exists today. Predation is a serious problem which has plagued the "D" Street tern colony for years and has, on more than one occasion, resulted in complete failure of nesting on the site for an entire season. Because of this baseline condition, project impacts would be those resulting in losses above and beyond what currently exists. By the same token, if background predation levels at the colony are reduced by predator control measures associated with the project then the project features associated with tern losses would be offset.
- R12 Comment noted.
- R13 Comment noted. Text will be revised to reflect the inherent difficulties in implementing such a long-term and massive mitigation effort.
- R14 This comment is noted. Also, see Alternatives 5, 7 and 9, which have substantially reduced density from the proposed project. Even with substantially reduced density, the bay water would be obscured, as any structure, even one-story, would obscure views. However, Marina Parkway and the bayside parks would create public opportunity to see/access the bayfront.

calculations in the DEIR have been prepared using standard methodology and should therefore provide an adequate estimation of levels-of-service.

R26 The land use trip generation assumptions are shown in Appendix H, beginning on pg. 4-1.

WILLIAM J. ROBENS

R27 P. 3-181 In the second from the last paragraph, there is a discussion about the intersection of "E" St. with Marina Parkway. Since "E" St. becomes and does not intersect with Marina Parkway, I have no idea what is meant. This is an incomprehensible paragraph. Even so, it makes more sense than the following one.

R28 The reasoning for the assumption made in the last paragraph eludes me. This is a critical assumption, since the west-north movement is or could be a major problem during the a.m. peak in the future. The reasoning needs to be clarified. Use pictures, elaborate. Brevity is not the issue here. Clarity is.

R29 P. 3-184 In the first full paragraph it is stated that the existing volumes on "E" St. were reduced by 15 percent due to the expected completion of State Route 54. Fifteen percent seems quite high to me. Where does this number come from? Substantiate this critical reduction.

R30 Since this is a public document, it seems like a brief explanation of ICU and LOS is in order.

R31 Table 3-11 This should be expanded to include freeway ramps and all city intersections and streets which are more than marginally affected.

R32 Calculations should include capacity reductions due to trolley gate down time.

R33 Figure 3-XVIII The southbound on-ramp ADT from "E" to I-5, 1800, seems too low. The existing ADT for this ramp is 6500 according to Figure XV.

R34 Table 3-12 and 3-13 See comments for Table 3-11.

R35 P. 3-191 Discussion of analysis should include impacts on all Chula Vista streets impacted by the development. Also, the trolley gate down time would worsen impacts at all the streets where there is a gate - not only at "E" Street. This should all be analyzed for their impact (second para.).

W. J. Robens

William J. Robens
Conservation Chair
South Bay Group
San Diego Chapter
Sierra Club

R27 The paragraph refers to the intersection of "E" Street/Marina Parkway (the east-west street which changes the name from "E" Street to Marina Parkway on the west side of the interchange) with Bay Boulevard/I-5 southbound ramp (the north-south street with Bay Boulevard as the street on the south leg of the intersection). This paragraph describes the assumptions made regarding overriding turn moves in calculating the levels-of-service.

R28 The last paragraph on the page also refers to assumptions of turn movement overlaps and was deleted from the text of the DEIR. A detailed explanation is provided in Appendix H.

R29 The 15 percent reduction in ADT on "E" Street due to the expected completion of SR-54 was based on the SANDAG Chula Vista General Plan computer traffic forecast results. The reduction of 15 percent seems reasonable when compared to similar parallel routes of a freeway and a surface street in the City of San Diego, i.e., SR-52 paralleling Clairemont Mesa Boulevard. Before the construction of SR-52 between I-805 and I-5, the ADT volume on Clairemont Mesa Boulevard (between Kearny Mesa Road and Mercury Street) in 1988 was 60,300 ADT. After the construction of the freeway, the ADT count in late 1989 was 35,100 ADT, a 42 percent decrease. This example illustrates the effect of through traffic diverting from a surface street to a parallel freeway.

R30 Appendix H explains ICU and LOS.

R31 The comment on the scope of the traffic study is addressed in Response R22. The Supplemental Technical Report prepared by JHK (January, 1991) includes additional roadway segments on this table as necessary.

R32 Capacity reductions due to trolley gate down time are addressed in Response R24.

R33 The volume shown is the correct assumption. This volume is less than that existing since the westbound to southbound I-5 traffic will enter I-5 by way of the proposed loop ramp in the northwest quadrant of the interchange, and only the eastbound to southbound I-5 traffic will enter by way of the existing ramp.

R34 The comment on the scope of the traffic study is addressed in Response R22.

R35 Comments on scope of the traffic study and trolley gate down time have previously been addressed (Responses R22 and R24).

WILLIAM J. ROBENS

EIRs are intended for distribution to the general public, non-experts in the fields of biology, traffic, etc., and should be written with that in mind. This particular section seems more intended to confuse rather than enlighten the general public.

R22 2. The scope of the traffic investigation is too narrow. It is isolated solely to the adjacent intersections. Specifically the study should address at a minimum:

- the change in LOS on I-5. ADT is increased by 16,000 by the project (Alt. 1 vs. proposed project). What is the impact of that large increase?
- the new LOS on "E" St. east of Woodlawn, especially at its intersection with Broadway.
- the impact on Woodlawn between "E" and "F."
- any other Chula Vista streets impacted by the development.

R23 3. A comparison between Alt. 1 and the proposed project shows an increase in ADT of only 2700 on "E" St. east of I-5. That seems like an very low and unrealistic number to me. I question the assumptions that were used in deriving such a minimal increase.

R24 4. There is considerable trolley discussion (pp 3-178, 179, 185, 191). I assumed while reading the EIR that the consequences of the trolley were used in determining street capacities. The discussion under "Analysis of Significance" indicates otherwise. Apparently the trolley impacts were ignored in the computations. It is totally unrealistic to discount gate down time in determining capacity and LOS at all affected intersections. The EIR should be changed to reflect the existence of the trolley with the most realistic operating circumstances.

Specific references follow.

R25 Table 3-10. This table is too limited in scope (see above comments). Also the results seem unrealistic. Having made the west to north movement from "E" St. to I-5 dozens of times in the a.m. peak, and having waited through multiple signal cycles many times from Woodlawn until I finally got onto the freeway, I question the ICU of 0-46 and the resultant LOS of "A." Similarly, I am suspicious of the calculations that derive an LOS of "C" for the south to east movement during the p.m. peak at the same interchange.

R26 Figure 3-XVI. The information in this table should be broken down so that separate land use trip generation assumptions can be verified.

R22 The LCP Resubmittal is estimated to generate approximately 9,200 ADT more than the certified LCP. As assumed in the DEIR, only 75 percent of this additional ADT or about 6,900 ADT, is distributed to I-5, 4,500 ADT to/from the north and 2,400 to/from the south. This increased ADT is only approximately 3 percent of the projected year 2010 traffic volume on I-5 north and south of "E" Street as projected by SANDAG in their Series VII Regional Transportation Plan. This low volume increase can be considered insignificant. The Regional Transportation Plan guides the coordination and programming of regional improvements among the local, state, and federal agencies. The Chula Vista General Plan land use assumptions, including the approved LCP land use, should be included in SANDAG's land use assumptions for the year 2010 traffic forecasts used to develop transportation improvement recommendations in the RTP. If that is the case, then the RTP should be considered as providing the cumulative analysis for I-5. The 1989 RTP shows existing moderate congestion along I-5 south of SR-54 increasing to heavy congestion in the year 2010, without recommending transportation improvements. It is assumed, therefore, that the projected level of congestion in the future is considered acceptable.

The revised DEIR expands the study area for the proposed project, Alternative 1, and Alternative 8 to the east to Broadway. Please refer to the Transportation Access Section of the DEIR for discussion of additional intersections and segments.

R23 The impact of Midbayfront traffic to Woodlawn Avenue between "E" and "F" Streets is considered to be minimal and therefore insignificant, since the only Midbayfront traffic assumed on Woodlawn Avenue would be directed to or from commercial driveways and not through traffic. The revised DEIR expands the study area to the east to Broadway. Also, this revised traffic analysis assumed approximately 50 percent build-out of the redevelopment projects within the Broadway Avenue corridor (south of "E" Street) in the Adopted General Plan.

Any other Chula Vista streets impacted by the Midbayfront traffic, not previously analyzed, are considered to have minimal (and therefore insignificant) Midbayfront traffic (less than 10 percent). However, the revised DEIR expands the study area to the east to Broadway.

R24 The reason that the increase in ADT on "E" Street east of Interstate 5 is less than might be expected between the no-project alternative and the proposed project is that under the no-project alternative a high level of traffic activity (approaching the functional capacity of the roadway) is forecasted. Thus, the additional traffic generated by Bayfront development will utilize alternate parallel routes to access the project site.

R25 The revised DEIR expands the discussion of trolley impacts. Please refer to the Transportation/Access Section of the DEIR.

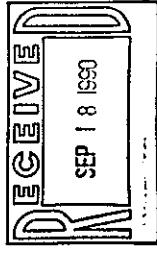
R26 The comment on the scope of the traffic study has previously been addressed in R22. Intersection levels-of-service judgements based on personal observations could vary widely from calculated levels-of-service. The intersection levels-of-service

Comment S



SAN DIEGO AUDUBON SOCIETY

4901 MORENA BLVD STE. 703 • SAN DIEGO, CA 92117 • 619/483-7820



Comment S - San Diego Audubon Society

- S1 The biological consultant has reviewed the analyses and conclusions from the avian flight study. Though we believe the Avian Flight Study data reflect general flight patterns accurately (see General Response 3.3.1.1, and Representative Nature of the Field Data, pp. 61-63 of Avian Flight Patterns Investigation, Section II of Appendix C of the DEIR), we recognize that several field seasons would have provided a more solid data base from which to draw conclusions. We also recognize that ongoing drought conditions have decreased water levels and bird activity in the brackish marsh along "F" Street. In reevaluating the conclusions from the Avian Flight Pattern Study in light of these data limitations, we consider the impacts to avian flight patterns to be potentially adverse but not significant. Additional information on flight pattern disruption will be brought forward from the Avian Flight Pattern appendix into the main body of the DEIR. See General Response 3.3.1.1 and Letter Response Q1.

September 11, 1990

Environmental Review Coordinator
City of Chula Vista
P.O. Box 1087
Chula Vista, CA 92012

The San Diego Audubon Society has reviewed the Draft EIR for the proposed revision to the Chula Vista LCP as submitted by Chula Vista Investors.

In general, we are in agreement with the conclusions of the EIR, namely that the project would have a large number of significant and unmitigatable adverse impacts on the Bayfront environment. We concur with the finding that the proposed down-scaled alternatives would not significantly modify the severity of these impacts. The proposed alterations to the Chula Vista bay wetlands would seem so severe that it is doubtful either Coastal Commission or Corps of Engineers (404 permit) approval could be obtained.

The only portion of the DEIR we would suggest be re-examined is the contention that the effects of development to avian flight patterns (p. 4 of the Impact Matrix) have "no or limited impacts." Although specific studies on this particular phenomenon may be limited, the continuing diminution in available wetland areas along the Bay, combined with increasing encroachment of bulky buildings along the bayfront, cannot help but have serious detrimental effects to the ability of migratory birds to successfully find passage, and resting areas, through the San Diego metropolitan area (which, as is well known, lies at a critical point on the Pacific Flyway). We urge the consultants to re-examine this issue.

The significant and unmitigable impacts identified in the DEIR result in our recommendation that this proposed amendment to the Chula Vista LCP be rejected.

For the San Diego Audubon Society,

Norma Sullivan

Norma Sullivan, Conservation Chair

Comment T



ENVIRONMENTAL HEALTH COALITION
1844 Third Avenue • San Diego, California 92101 • (619) 235-0281

2000-02-02

Comment T - Environmental Health Coalition

- T1 Comment noted. Refer to General Response 3.2.3.
T2 Refer to General Response 3.2.3.

ICERS
Sue Woods
President
SD Community College District
Laura Failla, MSW
Vice President
Child Protective Services
Tony Peltino, MA
Recorder
SD Community College District
Anne-Marie Feeney, Ph.D.
Secretary
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RE: RESPONSES TO THE ENVIRONMENTAL IMPACT REPORT
(EIR) FOR THE CHULA VISTA BAYFRONT PROJECT

RE: OF DIRECTORS*

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SD School of Medicine
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John County Health Services
Chairwoman
Order
Sheld Whitton
Sheriff's Office Crime

September 25, 1990

The Environmental Health Coalition's Clean Bay Campaign goal is to clean up, restore, and protect San Diego Bay. There are several areas in which this EIR does not deal adequately with all issues of water quality and hydrology that impact the Bay. These concerns, questions, and direct conflicts with existing law are listed below.

3.1 GEOLOGY/SOILS/GROUNDWATER HYDROLOGY/WATER QUALITY

GENERAL COMMENTS ON GROUND DEWATERING DISCHARGES

T1 This EIR states many times that dewatering either for construction or as a permanent discharge is planned and, in fact, a means of mitigating some negative effects (ex. pg. 3-12, 3-13). There are several serious problems with this approach.

CURRENT REGULATIONS

T2 The General Permit for Groundwater Dewatering Discharges (NPDES 90-31) issued by the Regional Water Quality Control Board states "the permit will prohibit discharges of dewatering waste to San Diego Bay from any new permanent groundwater dewatering operations."

In addition, other provisions of NPDES 90-31 have been petitioned by Environmental Health Coalition to the State Water Resources Control Board and we are hopeful that this order will be rescinded.

John Tokewell
EWG-SD

: Should this petition be successful, construction dewatering would not be allowed to be discharged into the storm drains or the bay. Unless plans are made PRIOR to development approval, dewatering must not only be stricken as a method of mitigation, but rather should be added to significant impacts to be mitigated.

Further, if the Petition is not granted, no new permanent discharges will be allowed and plans for dealing with anticipated discharges should be stated and resolved as part of the project plan PRIOR to consideration for approval.

The Metropolitan Sewer District (MSD) has a position of no permanent dewatering discharges will be accepted into the sewer. This means that any permanent dewatering practices must discharge into a site other than sewer, bay, or storm drains.

In addition to the Regional Board's and the MSD's prohibitions on groundwater dewatering discharges, the California Bays and Estuaries Act states "only wastes which do not degrade the quality of the receiving waters are permitted." This standard would apply even to uncontaminated water whose level of salinity would upset the fragile balance of South Bay's waters and wetland areas. Since there is known contamination of the groundwater in the area (page 3-19) any dewatering would have to include treatment. And, it would be necessary to implement a monitoring program to ascertain the impacts of the discharges on water quality.

Groundwater restraints

T3 The above NPDES requirements should be addressed when the EIR evaluates the effects of construction, underground parking structures, and building foundations on the groundwater basin.

T4

"Impervious construction of all foundations and buildings should be required and all buildings should be constructed to withstand hydrostatic pressure" should be added to mitigation sections.

T5 3-10 and 3-13

The part of the sentence which reads "a permanent dewatering system..." on page 3-12 and last option on page 3-13 should be stricken. These options are directly opposed to stated regulations in the NPDES permit 90-31 on Groundwater Discharges and would not be permitted by current law.

T6 Page 3-10, 3-13, 3-23, 3-28, 3-116

An additional level of impact should be added to the synopsis on these pages "due to serious, unmitigable effects the project MAY NOT BE FEASIBLE FOR THIS SITE"

T3 Refer to General Response 3.2.3.

Recent EPA approval of the General Permit for Groundwater Dewatering Discharges (NPDES 90-31) issued by the RWQCB prohibits new permanent dewatering to be discharged to San Diego Bay. Current project plans do not call for dewatering on an ongoing or permanent basis.

Temporary dewatering during various phases of construction are, however, likely to be necessary. This temporary construction dewatering can be properly permitted under existing regulations (NPDES 90-31).

The text of the DEIR, Volume II has been corrected to reflect current regulations (NPDES Permit 90-31) on dewatering discharges to San Diego Bay.

T4 Design plans will be required to incorporate appropriate construction requirements and details to minimize the impact of groundwater on performance of structures. This issue will be further addressed in the project-level EIR.

T5 Comment noted. Text has been corrected to reflect current regulations (NPDES Permit 90-31) regarding dewatering discharges to San Diego Bay. Refer to General Response 3.2.3 and Letter Response T3.

T6 As stated in the DEIR, numerous impacts had not been mitigated to a less than significant level. Therefore, these potential impacts remained significant and not mitigated at the plan level.

Additional studies performed, and data acquired, subsequent to release of the DEIR indicate that feasible (standard) methods exist for mitigating most of these impacts to a less than significant level. Further studies will be required to evaluate potential impacts and possible mitigation measures, as well as to provide preliminary design data. Final evaluation of impact significance will be performed during preparation of the project-level EIR.

3.2 HYDROLOGY/WATER QUALITY

T7 Comment noted. The applicant will be required to comply with all applicable regulations, including pertinent portions of the Draft State Water Quality Control plans for Enclosed Bays and Estuaries of California (if approved prior to completion of permitting).

T7 Degradation of water quality- a mention of the California Bays and Protection Act provisions should be made here. Please see above.

T8 An additional significant hydrology/water quality impact is omitted. If groundwater is drawn out of the basin and into the proposed lagoon, the serious negative hydrological effects could result from:

1. Drying the surrounding wetland areas.
2. Lowering the water table in the area.
3. Drawing plumes of contaminated water into wetland areas and ultimately the Bay at a rate significantly faster than would occur naturally under existing geological conditions, from where they are located now in a possibly stable condition.

Dewatering can dramatically effect the hydrology of the entire groundwater basin. For example, before dewatering of the San Diego Convention Center began the large petroleum plume known as the "blob" moved at a rate of .2 ft./ year. After the dewatering process began it began to move at 20 ft/month. The EIR should address this kind of impact to the area.

T9 If the plans are to take an average of 50-80 gpm of water from the bay. What is the net loss of water to the lagoons that the area will suffer? This significant impact is not sufficiently evaluated in the discussion or the mitigation measures.

T10 Until the applicant states the intended depth of the proposed lagoons and the exact amount of water required, it is impossible to completely evaluate the impacts on the area's water quality and hydrology. The EIR is deficient in this area due to lack of information and needs to be revised to reflect the specifics which should be forthcoming from the applicant.

T11 Suggestion #6 states that to fill the proposed lagoon "An intake from the San Diego Bay is a possible, feasible source". Before making a recommendation of this sort, the EIR should examine the environmental feasibility of such a suggestion. The EIR should examine impacts on patterns of circulation, hydrology, etc., to determine feasibility. Further, if the bay is the source for the water, what is the net loss of water through evaporation? Can if be ascertained absolutely that water transfer between bay and lagoon will be avoided? If there will be water transfer how will the increased salinity affect the bay water? These are among the questions which must be answered before a bay intake is put forth as an option.

T7 Comment noted. The applicant will be required to adequately resolve the above potential impacts on the "F" & "G" Street Marsh due to groundwater pumping. Should subsequent investigations or conditions indicate that groundwater pumping is undesirable for use as a water supply, using San Diego Bay as a source of water (refer to General Comment 3.2.2.3) would be investigated further.

T8 Refer to General Response 3.2.3.5 for information regarding the potential for drying the surrounding wetland areas and/or lowering the surrounding water table in wetland areas.

T9 The existing extent of groundwater impacts may not necessarily be in a stable configuration. If the source has been removed or shut off, the combined effect of natural degradation and dilution will continue and the observed concentrations may decline. The influence of the proposed water supply wells is expected to be comparatively less than that observed in the vicinity of the San Diego Convention Center since the drawdowns and the total volume of water pumped also will be considerably less, as will the potential cost of installing water treatment facilities. For VOC movement to increase by a factor of 1,200 (the stated rate of 20 feet/month vs. 0.2 feet/year is an increase of 1,200), and based upon the assumption that the VOCs do not interact with the sediments and do not degrade, then the horizontal gradient must increase by a factor of 1,200 for a constant width and thickness of aquifer. The observed estimated gradients at the Midbayfront site range from approximately 0.001 ft/ft to approximately 0.0003 ft/ft. This corresponds to a change in water level from inland to the bay of approximately 1.5 to 0.5 feet over a horizontal distance of 1,500 feet. For the Chula Vista Midbayfront site, a 1,200-fold increase in gradient corresponds to extreme water level decline of hundreds of feet. The water level in the wells is restricted by the anticipated depth of the wells to not be capable of declining more than approximately 30 feet. Horizontal groundwater gradients will increase in the vicinity of the well field, but not at the magnitude as stated to exist in the vicinity of the San Diego Convention Center. The movement of VOCs will also be controlled by the combined effects of natural degradation, dispersion, and chemical interaction with sediments. All of the aforementioned factors are capable of reducing the potential movement of VOCs in comparison to the rate calculated by just considering the water velocity.

T10 Nevertheless, a monitoring plan will be required during any pumping, whether for temporary construction dewatering or for lagoon maintenance and makeup water. If VOC impacted waters are encountered during the dewatering process, the

treatment of the impacted water can be achieved by such conventional processes as air stripping or activated carbon filtration.

T9 Refer to General Responses 3.2.2.1 and 3.2.3.3 regarding net loss of water to the lagoons due to pumping.

T10 Refer to General Response 3.2.2.1 regarding intended depth and amount of water required.

The estimated water volume for the public central lagoon with an 8-foot maximum semi-public depth is approximately 46 acre-feet. The estimated water volume for the semi-public residential lagoon (with a 6-foot maximum depth) is approximately 10 acre-feet.

J. Hartan Glenn estimates that the total average water requirement for lagoon maintenance is on the average of 50 gallons per minute (gpm). Of this, approximately half (25 gpm) is lost to evaporation, while the other half (the other 25 gpm) is lost to leakage. This leakage amount is reintroduced to the aquifer, and available to be "recycled" by the water wells. Thus, net usage is actually approximately 25 gpm.

T11 The installation of groundwater supply wells is proposed as a feasible alternative to the construction of a salt water intake located in San Diego Bay. Therefore, a salt water intake is not addressed within the plan for the proposed development of the site.

The intake volumes required to feed the proposed lagoon are extremely minor when drawn from the bay. Fish and invertebrate entrainment and impingement have been considered and are readily avoidable by using a properly sized and screened intake cage. See also Response B28. It is important to note that evaporation occurring in the lagoon also occurs in the bay. While hypersalinity may occur in the lagoon at times, the magnitude of the bay would ensure that even if the lagoon leaks, salinity would not detrimentally affect adjacent bay habitats.

3.7 BIOLOGY

3-70, 3-80

T12 "Brackish marshes are very sensitive to any pH changes and any changes in the pH would have significant impacts." should be added to description of Brackish marsh. A more thorough discussion of the nature, value, and sensitivity of brackish marshes should be included.

3-71 This EIR should include a discussion of the wetlands and eel grass beds ability to decontaminate and cleanse water from urban runoff and contaminated discharges. This is a definite benefit to the Bay's water quality. This comment could also be under section 3.1.

3-88 It is stated that "For this reason, the loss or reduction of freshwater input will likely lead to a gradual shift in marshlands' structure...." This should be interpreted as a NON-MITIGABLE IMPACT on these areas.

3-89 Should be changed to read "Based on information at hand, impacts of increased freshwater discharge are considered significant and NOT MITIGABLE" Based on conclusion on previous page.

3-89, 3-92
T16 An additional potential impact from human presence was not presented in this EIR. Historically when high or even low densities of human populations are located near a marsh or wetlands area significant conflicts occur. Many of the conflicts are specified in this EIR but the conflicts of people and insects are not. The presence of stagnant pools of water, either through natural causes or through sediment accretion, are very attractive to insects that are at odds with human comfort, i.e. flies, mosquitoes. Typically, humans respond to unwanted insects or insects perceived as a threat to their well being by local or aerial application of insecticides. The EIR should evaluate the significant deleterious consequences of this and should include mention of this practice under Human/Pet presence Impacts. (page 3-95)

3-105 Conclusion about California Least Tern should read that "changes are significant and NONMITIGABLE" It is imperative to realize that even one failure of controls or monitoring could cause irreversible and devastating harm to this species. Even if risk can, in theory, be lowered, the consequences of an accident can be damaging beyond remediation and therefore, nonmitigable.

- T18 Since the EIR has not adequately addressed the dewatering discharge issues construction impacts must continue to be considered NONMITIGABLE.
- T19 Mitigation measures- two significant areas of impact are not on the list.
1. Dewatering discharges
 2. Effects of a salt water intake on the Bay
- T20 Mitigation measure #6 should speak to the fact that any storm drain discharges must meet the requirements of NPDES Storm Drain permits recently adopted and proposed by the EPA. How the project applicants propose to comply with these requirements should be explained by applicant BEFORE the planning process moves ahead.
- T21 New and innovative measures of prevention and mitigation should be evaluated. These could include:
- T22 1. Developing this project as a "toxic free zone" If toxics were not used there would be no danger of runoff to the environment;
- T23 2. It is possible to greatly dangers of toxic contamination danger if cars are not used in the project area. Project could be redesigned to use only electric trolley or other mass transit in the area thus greatly reducing urban runoff hazards;
- T24 3. Use of constructed (not natural) wetlands or aquaculture to treat water; and other appropriate technology measures could be built into the design of this project.
- Page 3-116
Analysis of Significance
- T25 1. A sentence should be added stating that these measures do not completely mitigate the effects of the project on the cleansing and detoxifying abilities of the wetlands and marshes. Any degradation of these areas degrades the beneficial uses for the bay and bay users.
- T26 2. This project has many serious, significant impacts on this area that are not, at the present time, mitigable. There should be a representation that this project is perhaps, NOT FEASIBLE FOR THIS AREA due to the many nonmitigable effects. A further consideration in this respect is that while in theory some effects might be mitigable in practice even one failure of controls or monitoring could cause irreversible and devastating harm to the area. Even if risk can be lowered, the consequences of an accident can be damaging beyond remediation.
- The EIR does not thus determine what is considered feasible, rather the decision-makers do, which in this case is the City of Chula Vista, and ultimately the California Coastal Commission. The City and the Coastal Commission shall not "approve or carry out a project for which an EIR has been completed which identifies one or more significant environmental effects of the project unless the public agencies make

T27 7-1 economic factors that the wetlands areas of the South Bay provide should be figured into the analysis of reasons to protect this area. The irreversible environmental changes that will result from the proposed project will cause economic loss to the area. The wetlands cleanse and detoxify the waters of the San Diego Bay and are an important economic resource for the bay as nursery for marine life and the public users of the bay's waters. The EIR should address these issues.

SUMMARY

T28 The Clean Bay Campaign's main concerns with this EIR are:

- the lack of groundwater dewatering discharge considerations addressed in a knowledgeable fashion;
 - that some of the EIR's recommendations conflict with existing law;
 - that it does not consider a clear recommendation of project change or relocation that might be warranted because many impacts are significantly negative and non-mitigable.
- Addressing these issues may require significant changes in design or location of the plan. If so, these should be discussed in this early stage and the project should not proceed until these concerns are resolved.

T29 It is the City of Chula Vista's responsibility to make certain that the project in question is feasible for the area before it progresses to the next planning stage. This EIR clearly states that many significant effects of this project, as proposed, are not mitigable. We concur with the findings of this EIR in those respects. Further, we find many additional areas where effects would be significant and nonmitigable.

T30 It must therefore be stated in the EIR that it is possible that the project is NOT FEASIBLE for this site (given current technological confines).

If the plan is not feasible, the next planning steps should not be taken.

Thank you,

Laura Hunter
Clean Bay Campaign Coordinator



Comment U

STARBOARD DEVELOPMENT CORPORATION

STARBOARD
DEVELOPMENT CORPORATION

September 26, 1990

HAND DELIVERED

Ms. Robin Putnam
City of Chula Vista
Community Development Department
276 Fourth Avenue
Chula Vista, CA 92010

Re: Comments/Suggested Corrections to Mid-Bay Front LCP
Resubmittal No. 8 Amendment, Environmental Impact Report

Dear Robin:

At the request of our client, Rohr Industries, Inc., we are responding with a list of suggested amendments/corrections to the latest screen check draft E.I.R. for your consideration and inclusion, where appropriate in the final version of the report. The following amendments/corrections cover the major issues related to their existing campus property and the adjacent site for the new office complex:

SUMMARY SECTION.

- U1 1.** Summary - Page 2 - "Hydrology/Water Quality" - desilting basin, 404 Permit issues, no longer applicable with regard to Rohr (p. 3-15, 3-112).
- U2 2.** *Page 9 - "Utility Service" - reference to installation of 12" water main and upgrade from 8" to 12" in "F" street, all on-site mains at 12" (also p. 3-174). Should not be a requirement for the Rohr project.
- U3 3.** Figure 2-II - Boundary of Subarea 1 southeast corner is faulty; all figures should be revised throughout text to reflect correction. (Line should continue straight to the east where it currently jogs south then east at G Street).
- U4 4.** Figure 2-IV - substitute latest site plan for Rohr project? Title project Rohr Industries Office Expansion in lieu of R & D - correct sub area 1 boundary.

Comment U - Starboard Development Corporation

General Response:

Rohr Industries, Inc. has completed a separate project design for their ownership east of the "F" & "G" Street Marsh; this ownership is shown on Figure 2-III of the EIR and is the rectangular piece of property east of the "F" & "G" Street Marsh and west of the SDG&E easement. Hence, some of the statements in the EIR which refer to the Midbayfront project as a whole, including this Rohr parcel, should be understood to be relating to the proposed LCP Resubmittal and not to the Rohr development proposal that was reviewed under the current certified LCP. The Rohr project EIR has been certified and is on file at the City of Chula Vista Community Development Department, 276 Fourth Avenue, Chula Vista. The proposed Rohr project is shown on the figure following this page.

- U1** This comment is noted. The Rohr EIR, which has been certified, describes the proposed Rohr project and all relevant impacts. All information pertinent to the Rohr proposal is referenced in that document.
- U2** This comment is noted. Please see Response U1. The Sweetwater Authority analysis did include the Rohr parcel. However, since Rohr now has a detailed proposed project, Sweetwater Authority would need to prepare an analysis specifically for this Rohr project. The Rohr EIR indicated that Sweetwater Authority has not yet completed a separate analysis for the Rohr project to determine the adequacy of the existing system and/or the need for any infrastructure improvements. The analysis prepared did, however, address infrastructure improvements required for build-out of the Midbayfront under the proposed LCP Resubmittal.
- U3** The boundary of Subarea 1 is the same as the boundary for the Midbayfront Planning Subarea in the City's certified LCP.
- U4** Refer to response U3. Also, this figure has been noted to refer the reader to the Rohr project as illustrated in this response.

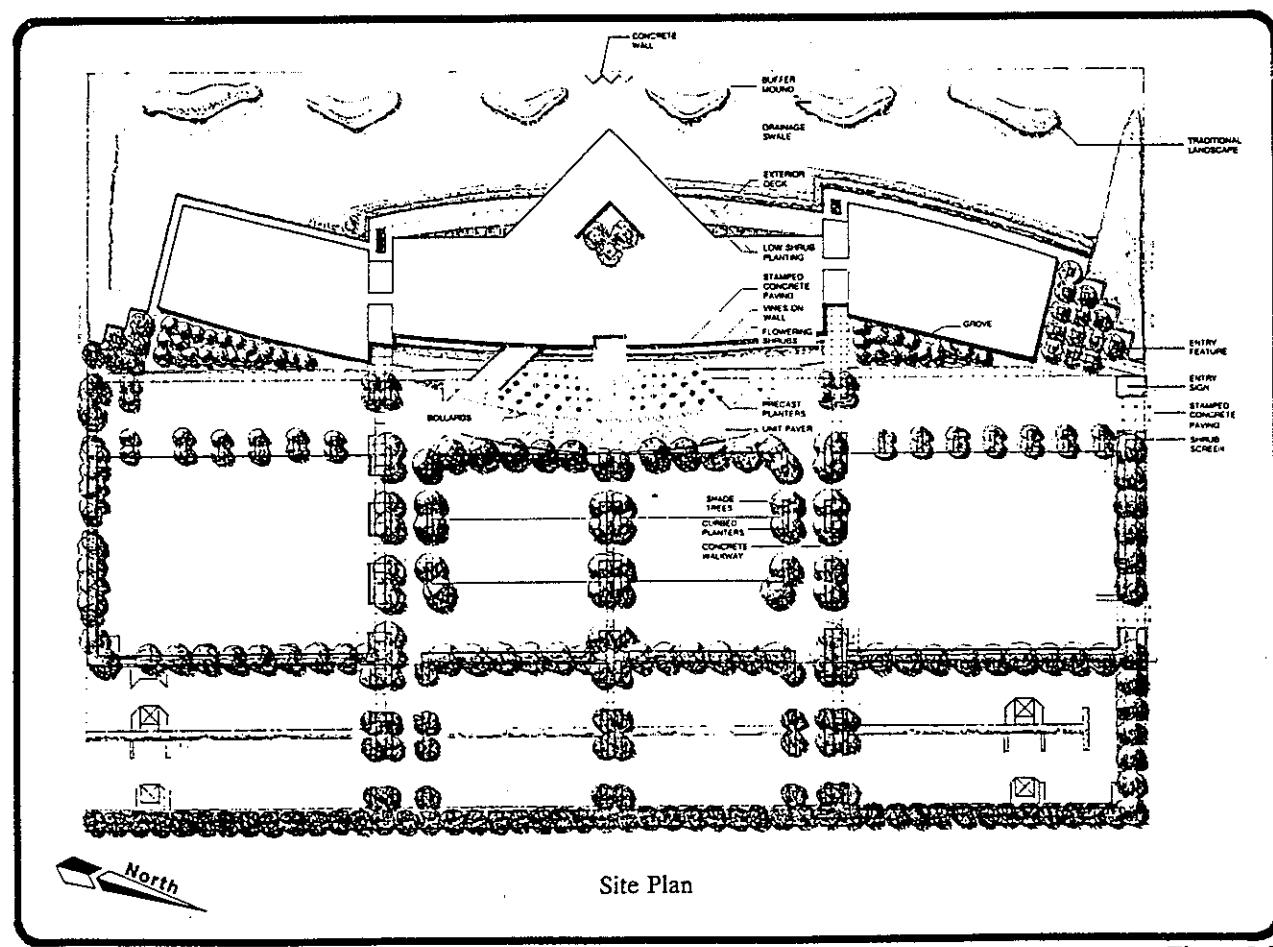
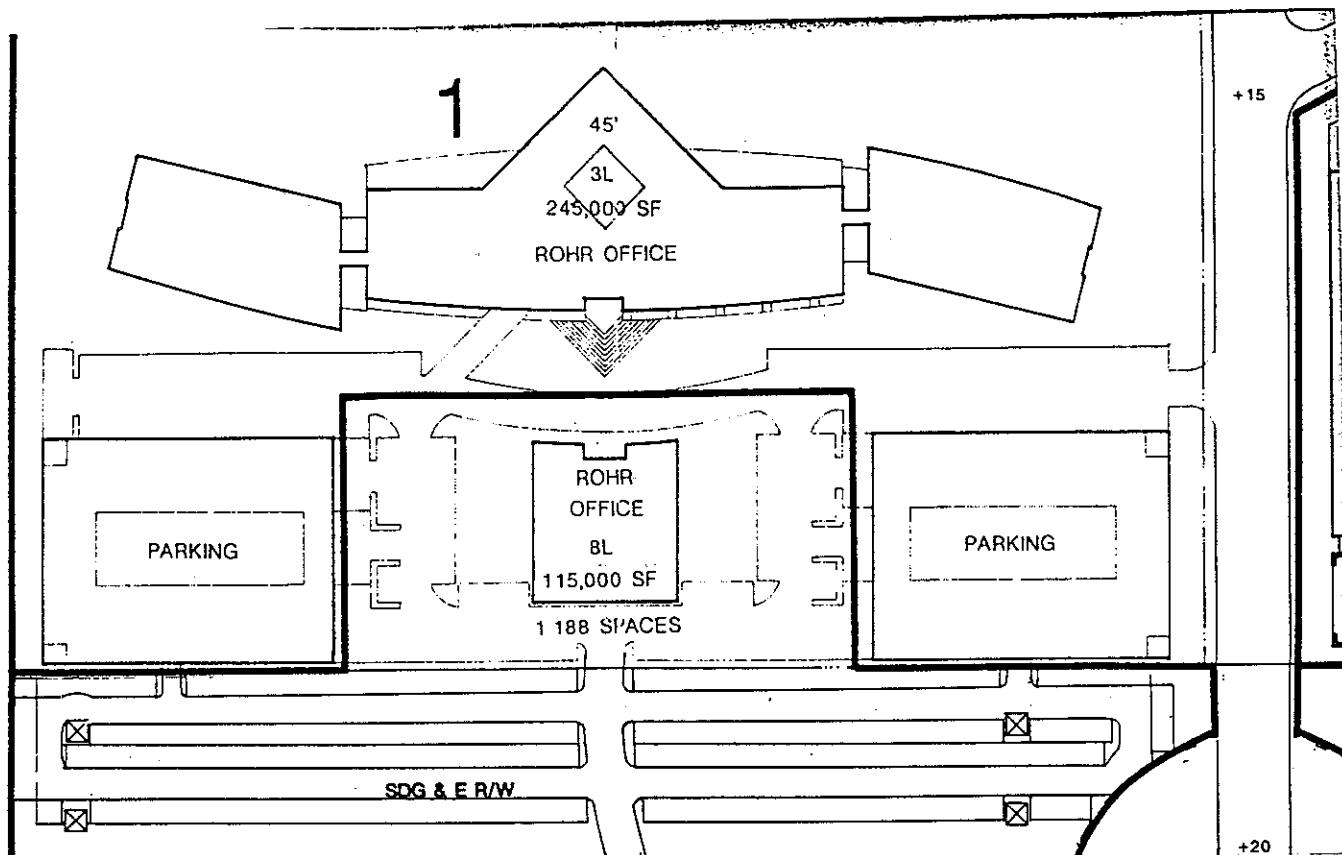


Figure 2-2

predominantly natural and scenic wetlands setting, to one of intense urban development." It is important to note that all of the alternatives would have the predominance of the development in the view from the Nature Interpretive Center, with the natural and scenic wetlands in the foreground. One of the goals of this project is to balance development and conservation, obviously the Midbayfront is going to be developed and the view on the other side of the marsh is going to be that of a developed area.

X24

The EIR states that in alternative #5 the overall visual impacts are substantially less than those of the proposed projects. The only significant difference between the proposed project and #5, in terms of view shed, is that the height of the buildings are reduced. The fact that you have the buildings in the background is not changed and the view is essentially the same except for the 120 foot high luxury hotel. All of the heights of the other buildings are simply reduced and the same wall of development occurs. There is some view through the development at the south end of the apartments and the office complex area. The certified LCP view is monotonous and uninteresting. A development with varied building heights is visually more attractive. In any case there is going to be a wall of development behind the wetland resources.

X25

Since it was not the direction of the Bayfront Conservancy Trust, this review does not consider any of the other key observation point views. This review does not deal with

Section 3.4 Conversion of Agricultural Lands, nor with Section 3.5 Air Quality.

Regarding Section 3.6, the only consideration of noise would be the impacts of the construction of the development and the actual habitation of the development on the wildlife within the wetlands. We agree that construction cannot be performed without making noise and that it is more important to avoid sudden, loud equipment noise and intermittent noise, rather than continual or elevated noise above a steady or rhythmic noise background. The most effective wildlife impact mitigation is to schedule the noisiest construction activities when the birds are least likely to be breeding or nesting near or on the project site. The fewest birds are present during the summers months but this is also the nesting time for Clapper rails and Least terns.

Biology

This is the most significant section of the LCP in regards to the project's effects on the wetland resources. In terms of existing conditions, the most vulnerable natural resource areas are those encompassed within the Sweetwater Marsh National Wildlife Refuge. The only significant habitat within the Midbayfront area is a reestablished freshwater brackish/seasonal marsh. That area is scheduled to be a desilting basin but could still function with some freshwater and brackish wetland values. However, the more bird use it receives, the harder it will be to maintain its water quality.

X26

Page 3-86 ¶12 "One hundred and forty five pairs (Fielding's Savannah sparrow) are known in the Sweetwater Marsh complex." There is no way of knowing that since 145 pairs were found in 1988, that there are still 145 pairs present. It is incorrect to say that "Sweetwater Marsh hosts a density of 2.3 pairs per hectare and 5.2 percent of the State's total number of Fielding's Savannah sparrows." The last sentence of the same paragraph says "Due to the timing conditions under which the surveys were conducted, no population estimates for this species have been made." This is a direct contradiction to the first sentence that says "145 pairs are known in the Sweetwater Marsh complex."

X28

Page 3-86 ¶15 "Additional sensitive wildlife observed on the site, these species are either rare on the site and do not utilize the habitat regularly, are only sensitive on their local breeding grounds." It is hard to understand this. They are only sensitive on their local breeding grounds?

X24 Refer to W24.
X25 Refer to W25.

X26 Refer to W26.

X27 Refer to W27.

X28 Refer to W28.

- (3) Reduced density which is called the mid-range alternative--a 26 percent density decrease from the developer's proposal
- (4) Reduced density No. 1-A, a 26 percent density decrease with a slightly different land use pattern
- (5) Reduced density No. 2, within an intensity range of existing Midbayfront land uses, a 47 percent density decrease from the developer's proposal.
- (6) The possible location alternatives
- (7) Reduced density No. 3 with a modified design
- X18** In addition to the development being environmentally sensitive, such that it does not affect wetland resources, it is important that it be economically feasible. It must be profitable to be able to pay its annual tax assessment fees to the BCT and thereby insure the ongoing operation of the Nature Interpretive Center.

ENVIRONMENTAL IMPACT ANALYSIS

X19 Hydrology/Water Quality

Approximately 50 acres of the development, which would have drained into the San Diego Bay, has been redirected into a proposed detention basin, adjacent to the F & G Street Marsh. The EIR states that the sediment traps will attenuate flood peaks and help control the flow of sediment and chemical pollutants into both the F & G Street Marsh and San Diego Bay as storm runoff will leave the detention at a slower, controlled rate. Even though the water leaves at a slower, controlled rate, the discharge of soluble nutrients will not be stopped. Particular attention to the control and management of Nitrite (NO₂), Nitrate (NO₃), Phosphate (PO₄), Ammonia (NH₃) and Dissolved Reactive Phosphorus (DRP). Those compounds are soluble in water and will not be removed by the proposed sediment traps. Slowing the flow rate will not contain them.

X20 There are insufficient data to determine the potential effectiveness of the sediment traps. We need to know how they will be designed and constructed. Sediment traps containing concrete boxes are much easier and cheaper to clean than are natural bottom ponds. A total of 34.5 acres will still drain into the San Diego Bay, but are to flow through storm drains with oil and grease traps. However, those oil and grease traps will not stop soluble nutrients from flowing into the Bay and this will result in nutrification and pollution of the Bay.

X21 All five project alternatives contain these same significant issues: siltation, chemical contamination, degradation of water quality from surface runoff of pesticides, fertilizers, oil, grease, etc. and the potential of contaminated groundwater. Those can be mitigated as already mentioned. All of the proposed mitigation measures on pages 3-20 and 3-21 should be implemented.

View Shed Analyses

X22 The only view analysis that is pertinent to the operation of the Nature Interpretive Center is KOP #1 (key observation point)--from the Chula Vista Nature Interpretive Center. This is a representative view east and southeast, into the Midbayfront, for visitors to the National Wildlife Refuge and the Interpretive Center.

X23 The proposed project would introduce urban forms within the foreground distance zone of the KOP #1. "The visual aesthetic impacts from this viewpoint are considered significant since the project will change the overall character of the view from a

- | | |
|-----|---------------|
| X18 | Refer to W18. |
| X19 | Refer to W19. |
| X20 | Refer to W20. |
| X21 | Refer to W21. |
| X22 | Refer to W22. |
| X23 | Refer to W23. |

the development and it mentions fertilizers, no attention is given to nutrients which come from fertilizers and detergents. Deterioration of water quality in the lagoons, wetlands and San Diego Bay will come from the various Nitrogen and Phosphorus compounds contained in fertilizers and detergents. Particular attention to the control and management of Nitrite (NO_2), Nitrate (NO_3), Phosphate (PO_4), Ammonia (NH_3) and Dissolved Reactive Phosphorus (DRP) inputs must be given. These chemicals are soluble in water, seldom adhere to particulates and will not be removed by the proposed sediment traps. The operation of the detention basin upstream of the F & G Street Marsh is intended to maintain water quality but nutrients are not properly addressed.

X13

Project description

Page 2-2, ¶ 2 "The refuge was established because of unique wetland components which provide nesting and/or foraging for over 190 species of birds." Surveys conducted over many years and those performed by the EIR's biological consultants show that there are 196 species of birds which have been observed in the area. Consequently, it is appropriate to say that the "The refuge was established because of unique wetland components which provide nesting and/or foraging for over 190 species of birds."

Appendix C, Biological Resources - Midbayfront, Table 2, Animals observed or detected along the Chula Vista Midbayfront, does not include three species of birds known to occur in the area. While they may not have been observed by the consultants, the surfbird, (*aphriza virgata*), Black-chinned hummingbird (*Archilochus alexandri*) and Sage thrasher (*Oreoscoptes montanus*) are known to occur in the area.

X14

The proposed project is the resubmittal of the LCP which consists of changes in the land uses and maps of the LCP itself, which was the original LCP of 1985. One of the major changes of the local coastal plan is redesignating of open space on all City Plans for the "D" Street fill and Gunpowder Point, to accommodate the National Wildlife Refuge as an open space area. The Bayfront Conservancy Trust supports this action.

The second major change is to Midbayfront subarea 1, which will permit new uses, as well as more intense levels of existing land uses in the area than are currently allowed in the LCP. The EIR focuses on the analysis of impacts resulting from this second change, specifically of the development plan for the subareas as proposed by Chula Vista Investors. It is this plan that is considered by the EIR for evaluation of potential environmental impacts from the development.

The total proposed development plan consists of approximately 4.2 million square feet of building space and the existing approved LCP allows up to 2.5 million square feet. So the proposed development is approximately 1.7 million square feet greater than the current maximum allowable density in the Bayfront area.

X15

There is a potential for significant negative effects to result from public access on the beach. A physical barrier will be needed to keep people off the beach along the National Wildlife Refuge. The wetland set backs along the perimeter of the development, as outlined on pages 2-4 and 2-5 for the wetlands buffer, should be sufficient to protect wetland resources, provided that the buffers contain impenetrable physical barriers to keep feral cats, dogs and people from entering the wetlands.

X16

The total proposed development plan consists of approximately 4.2 million square feet of building space and the existing approved LCP allows up to 2.5 million square feet. So the proposed development is approximately 1.7 million square feet greater than the current maximum allowable density in the Bayfront area.

The EIR evaluates seven different alternatives:

- (1) No project alternative
- (2) Development under the existing certified LCP

X13 Refer to W13.
X14 Refer to W14.
X15 Refer to W15.
X16 Refer to W16.
X17 Refer to W17.

X6

Intake from the San Diego Bay is a possible, feasible source. It would be preferable to use saltwater rather than freshwater. It appears that it may be better to withdraw seawater from the Bay rather than pumping groundwater, particularly if the groundwater is not saline, it is contaminated or large-scale withdrawals will negatively affect the aquifer. The aquifer study performed by Geo-Con indicates that within 500 to 100 feet of San Diego Bay there is a water supply of 10 to 20 gallons per minute. Eight wells would be needed to meet the demands of the proposed lagoon. The pumping costs for 8 wells delivering 20 gallons per minute are probably much greater than the pumping costs of water withdrawn from the San Diego Bay.

X7

While Geo-Con consultants did not perform contaminant analyses on their test well, there is available information indicating that trichloroethene (TCE) concentrations and petroleum hydrocarbons were present at elevated levels in wells drilled at Rohr Industries. It is possible that these same pollutants are present in the aquifer proposed for source water for the lagoons.

X8

There is a significant question regarding the availability, quantity and quality of groundwater for the lagoons. There is a potential for the groundwater to be contaminated and unsuitable for the lagoons. The potential for negative effects from saltwater intrusion and other disruptions of the groundwater lens and aquifer has not be determined. More extensive and thorough studies of groundwater quality are needed to assess availability, quality and quantity of makeup water for the lagoons. An estimation of evaporative losses from the lagoon should be included in the amount of water needed to keep them full. An offsite intake for saltwater to provide makeup water for the lagoons would avoid groundwater availability and quality problems.

X9

At this time not enough information is available to analyze this important issue as it relates to biological resources. Additional studies are needed. Pumping costs and the effects of large-scale groundwater withdrawals should be determined. At the project level it is clear that the proponent is going to have to make a decision between groundwater or baywater makeup for the lagoon and perform the needed analyses. Once the studies are done the associated impacts can be evaluated.

SUMMARY OF IMPACTS AND MITIGATION

X10

The LCPR No. 8 proposes to change land uses under the existing certified LCP, to open space which would be consistent with the establishment of the Sweetwater Marsh National Wildlife Refuge. The Bayfront Conservancy Trust supports this change. The EIR repeatedly states that all mitigation measures should be implemented and monitored via a mitigation monitoring program. The monitoring program should be required.

Table 1-2 Mitigation Measures

The list of feasible mitigation measures are quite good. Some specific comments follow.

Hydrology and Water Quality

X11 Studies should address the effectiveness of proposed oil and sediment traps as well as that of the desilting base in removing both sediment and chemical pollutants from the F & G Street Marsh and ultimately the San Diego Bay.

X12

Under hydrology, the EIR says that "water quality traps for contaminant control must be approved by the City Engineering Department before they may be installed. The City Engineering Department must verify that all EPA and any regional water quality control board standards are met." While contaminants mentioned in the EIR, cover runoff from

X6

Refer to W6.

X7

Refer to W7.

X8

Refer to W8.

X9

Refer to W9.

X10

Refer to W10.

X11

Refer to W11.

X12

Refer to W12.

Under biological resources, the EIR identifies five adverse impacts that the EIR considers to be significant and unmitigable:

- (1) Alteration of predator/prey relationships
- (2) Avian predator enhancement
- (3) Loss of raptor foraging habitat
- (4) Clapper Rail impacts
- (5) Impacts on Belding's Savannah Sparrow

There are two issues that are raised repeatedly in the EIR. The first is an adverse impact that the EIR considers to be significant and unmitigable (#3), the loss of raptor foraging habitat. The second issue is the composition of makeup water for the lagoons. These two issues are treated below rather than repetitively as they arise in the EIR.

X1 Loss of Raptor Foraging Habitat

It is important to note that the loss of raptor foraging habitat would occur under any proposed alternative for that area. The Midbayfront is scheduled to be developed so those changes are going to occur regardless. There are significant upland areas on Gunpowder Point and in the surrounding marsh to support healthy prey and raptor populations.

X2

The Midbayfront is an area that has been greatly disturbed and native plant communities have already been removed. Since that area is being developed basically in exchange of the sensitive wetlands permit for a 404 dranage permit to develop the nonsensitive midbayfront, it is somewhat unfair to deem this as significant environmental impact, vis a vis, the tremendous contribution of the other areas which constitute foraging area for the same species. Furthermore, the loss of the midbayfront to development is not significant because it is not a change to the currently certified LCP which zones the midbayfront for development.

X3

While it is true that the development area would result in the loss of foraging use for Northern harriers, Kites and other raptors, this loss of foraging habitat would occur with any development of the area. It would occur if it was a school, a church or any other type of development. The development is not going to result in loss of important flora. The Bayfront Conservancy Trust has always supported saving the most sensitive habitat, the wetlands, while allowing development of the nonsensitive upland areas.

X4

Lagoon Makeup Water
The report goes back and forth between the source of makeup water for the lagoons. For example: On p. 2-4, ¶ 3, sentence 3: "The ten acre lagoon would be salt water and would not connect with the San Diego Bay and would extend into the central portion of the area." Then p.3-10, under Feasible Mitigation Measures, "detailed groundwater quantity and quality studies must be performed to verify the ability to pump the required amount of water to fill the ten acre public lagoon." Page 3-107, Marine Resources Impacts says that "the proposed project includes two direct drainages to San Diego Bay from the development area and would require a saltwater intake system to feed the internal lagoons."

The EIR refers to the 10-acre lagoon as deep water habitat but does not provide any information on the depth nor the volume of water it will contain. The volume of water in both lagoons needs to be determined to adequately assess potential effects. The report states that the lagoon is proposed to be saltwater pumped as available groundwater. It also says that if groundwater is not available in the required amount or if it is contaminated, then a different source must be used. The water demands for the saltwater lagoon indicate a continuous average sustained yield of 50 gallons per minute and a maximum of 82 gallons per minute in the summer months.

Comment X - Bayfront Conservancy Trust, Review of the Draft City of Chula Vista Midbayfront LCP Resubmittal No. 8 Amendment Environmental Impact Report and Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan

These comments are essentially the same comments found in Letter W. Please refer to the responses to Letter W.

| | |
|----|--------------|
| X1 | Refer to W1. |
| X2 | Refer to W2 |
| X3 | Refer to W3. |
| X4 | Refer to W4. |
| X5 | Refer to W5. |

PREFACE

The Board of Directors of the Bayfront Conservancy Trust (BCT) directed the Executive Director of the Bayfront Conservancy Trust, to review the *Environmental Impact Report (EIR) for the Midbayfront Development and the Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan, prepared June 28, 1990*. At their September 11, 1990 meeting, the BCT Board directed Dr. Stephen Neudecker to submit his review of the EIR and the LCP to the Environmental Review Coordinator of the City of Chula Vista as his comments on the EIR and LCP.

This review expresses the professional opinions of Dr. Neudecker alone and not necessarily those of the Board of Directors of the BCT, its individual members nor their respective agencies. Furthermore, submittal of this review does not preclude each of the individual members of the BCT Board of Directors nor their respective agencies from commenting on the EIR or the LCP.

INTRODUCTION

At their July 21, 1990 meeting, the Board of Directors of the Bayfront Conservancy Trust (BCT) directed the Executive Director of the Bayfront Conservancy Trust to review the Environmental Impact Report (EIR) for the Midbayfront Development. Dr. Neudecker was instructed to only consider potentially significant effects resulting from the approval of the EIR on the operation of the Chula Vista Nature Interpretive Center (NIC) and on the surrounding wetlands. The Board directed Dr. Neudecker not to consider any other aspects of the EIR, such as visual aesthetics, conversion of agricultural lands, air quality, etc., that were not pertinent to the natural resources or operation of the NIC.

The Bayfront Conservancy Trust supports the development of the midbayfront because one of our central goals is to balance the needs of conservation and development, using the revenues generated by the development for education of the public on the importance of conservation of critical natural resources and the operation of NIC.

The development of the midbayfront is essential to the BCT and the operation of the NIC because its beneficial tax assessment district will generate tax revenues needed for our operation and maintenance (\$500,000 a year with annual adjustments for inflation). Consequently the development of the midbayfront area is of critical importance to the BCT and we support it. On the other hand, we need to ensure that the development of the midbayfront will result in an environmentally sensitive project that will not exert significant negative effects on the surrounding wetlands which we are trying so hard to restore, enhance and preserve.

In addition to the EIR for the proposed Midbayfront Development, this review includes an analysis of the Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan, prepared June 28, 1990.

REVIEW OF THE EIR

This review includes specific issues that could be potentially affected by the project, which include:

- (1) Drainage and groundwater
- (2) Land form alteration
- (3) Biology
- (4) Water quality
- (5) Environmental summary

Comment X

R E C E I V E D

SEP 20 1990

Community Development Dept.

REVIEW OF THE

DRAFT CITY OF CHULA VISTA MIDBAYFRONT LCP RESUBMITIAL
NO. 8 AMMENDMENT ENVIRONMENTAL IMPACT REPORT

and

DRAFT CITY OF CHULA VISTA LOCAL COASTAL PROGRAM
RESUBMITAL SPECIFIC PLAN

Submitted to the
Environmental Review Coordinator,
City of Chula Vista

P.O. Box 1087
Chula Vista, CA 92112

Submitted by
Dr. Stephen Neudecker
Executive Director, Bayfront Conservancy Trust

September 12, 1990

sensitive natural areas. The entire shoreline, except for the F Street intersection to the Bay is sensitive and public access should be prohibited.

W97 Section 7 Page II-54 Pedestrian and Bicycle Circulation Policies. Calls for public access to the parks and the shoreline from the northern portion of the Wildlife Refuge to the F & G Street Marsh end of the Refuge. This is the only area where pedestrians could be allowed shore access and there will need to be some kind of physical barrier to keep them from going north on the shore of the Refuge.

W98 Environmental Management Objectives Section 3 Page II-94. All of the management objectives as well all of the Environmental Management Policies contained in Section #4 are concurrent with the goals of the BCT.

W99 West Interface Area II-103 - 04. It says the interfaced area will have a shoreline walk, view points and public parks. Access to the beach must be restricted and all railings should be designed to prevent bird roosting.

W100 The most significant problem for the Bayfront Conservancy Trust in the LCP Resubmittal, is that the environmental organization and administration sections which occur in the certified Chula Vista Bayfront Specific Plan, Chula Vista Local Coastal Program Phase 3, Amended 11/88 are not included at all. The currently certified LCP has environmental organization and administration section 19.885...which sets up the organization and administration of the Bayfront Conservancy Trust, outlines its management goals and objectives, its administrative organization, its functions and its sources of revenues, management of the plan "Wildlife Habitat Restoration and Enhancement", maintenance and monitoring. None of this critically important documentation has been included in the resubmittal. Much of the language use in the certified LCP can be adopted.

W101 Section 19.88.56, Revenue Sources of the certified LCP, says that the Bayfront Conservancy Trust would be funded by a beneficial tax assessment district which would assess an annual tax based on the gross annual revenues of every business in the Bayfront development. That annual assessment would need to total \$500,000 per year to cover the operating expenses and maintenance of the Chula Vista Nature Interpretive Center and the Bayfront Conservancy Trust, with a clause adjusting the assessment for inflation over time. Almost all of the language that is needed is included in that section of the certified LCP. The Bayfront Conservancy Trust is available to help determine the exact language for inclusion into the LCP Resubmittal.

W97 See Response W94.

W98 Comment acknowledged.

W99 Refer to General Comment 3.3.7.2 and to Response W96.

W100 Comment acknowledged. See Response W87.

W101 Comment acknowledged. See Response W87.

**REVIEW OF THE
Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan,
prepared June 28, 1990**

W87 **Bayfront Goals**
#E - Provide good regional access to the Bayfront. It is very important to discriminate between access to the Bayfront development and access to the Bay itself, through the development. The first is certainly desirable; the second is not. The public can not be allowed to walk along the shoreline of the Sweetwater Marsh National Wildlife Refuge.

W88 **II.5, #C - Discussion of Coastal Goals Policies. Specifically: Access to the Shoreline.**
Public access is now through shuttle bus to the Nature Interpretive Center. It says that the lack of adequate public access is due in part to the lack of development along the shoreline. Once again, this is an important issue with the National Wildlife Refuge.

W89 **A beneficial feature of the LCP Amendment is under #3 Water and Marine Resources, "C" Planned Provisions Page II-7. "This land use plan provides for the restoration (creation) of at least seven acres of new wetland and the enhancement of at least 0.5 acres of degraded wetland." The LCP also calls for the restoration (creation) of at least two acres of new coastal sage scrub habitat. The plan says that except for the desilting basin, all of the restoration acreage will be located within the Wildlife Refuge. Obviously, any activities on the refuge will need the permission and assistance of the USFWS. Much of the restoration is planned is within the Refuge (F & G Street Marsh).**

W90 Encouraging public recreational boating on the manmade lagoon is fine, but to encourage beach access and recreational boating off the National Wildlife Refuge is undesirable.

W91 Environmentally Sensitive Habitat Area #6 on page II-11. It mentions buffer zones of 100 feet minimum, maximum of 600 feet, separating the marsh from the development. These buffers are essential.

W92 Public access to the Wildlife Refuge is limited to the shuttle bus service to the Nature Interpretive Center. The CC&R's of the Midbayfront Project will prohibit dogs and cats and should also list acceptable fertilizers, pesticides and herbicides and prohibit kite flying. An effective educational program will be needed to ensure compliance with these important restrictions.

W93 Page II-16, Section #11 Coastal Visual Resources and Special Communities, "...open up the shoreline for public access and allow the public to experience the views from the perimeter of the Bayfront, outward." Experiencing the views and walking along defined corridors is acceptable but access to the shoreline itself is not.

W94 Land Use Policies Page II-29 #G.
Access to the Nature Center will only be provided by shuttle bus. This is desirable.

W95 Page II-39 #7 Land Use Design Policies.
There must be a visually unobtrusive separation between the wetlands and the development and it must contain a physical, but not visual barrier.

W96 Page II-39 Section 7 Land Use Design Policies.
Numbers 1, 2, 3, 4, 5, 6, 7, 8, 13, 17 are concurrent with the goals of the BCT. No. 15 talks about public access to the waterfront and No. 17 talks about public access prohibited in

W87 This is a comment regarding the proposed LCPR No. 8 document, and is thus not a comment regarding the EIR. These comments are not applicable to this EIR response-to-comments process.

W88 See Response W87.

W89 Comment noted.

W90 Comment noted.

W91 Comment noted.

W92 Comment noted. Refer to General Comment 16.2, and to Section I, Reduction of Predation Pressures, and Section III, Reduction of Potential Adverse Effects on Water Quality of CVI's proposed "Design Requirements". The prohibition of kite flying is addressed in Recommendation 24 on pg. 3-115 of Volume II.

W93 Comment noted.

W94 Acknowledged access to the Nature Interpretive Center will be provided by shuttle bus only. This will be a mitigation measure required by the final EIR.

W95 See Response B24. We contend that the barrier should be visual as well as physical to preclude as much human-related stimuli as possible from the wetland areas. Design standards proposed by CVI specify a limited number of overlook areas to allow views of portions of the National Wildlife Refuge (Section IV, Control of Human Activity to Reduce Impacts on Wildlife of CVI's proposed "Design Requirements").

W96 We contend all shore access should be prohibited.

W81

On p.3-70, ¶s 4&5 states that "sensitive *Suaeda esteroides*." It does not say sensitive to what. Is it sensitive to salt, is it sensitive to touch, is it sensitive to loud music? When the term sensitive is first used, it should be defined as a legal concept describing the relative population status of that species. It refers to a species of special concern or a potential candidate for listing as rare, endangered or threatened.

W82

Page 3-83, the top of the page starts with "sensitive wildlife." Numerous sensitive animals occur or have the potential for occurring within the project boundaries. Once again, the word "sensitive" is not defined. What does it mean? Does it mean these are species that are potentially threatened? Are they species of special concern? Please define "sensitive", because it is used very confusingly throughout the report.

W83

Throughout the EIR, the authors are confused about the difference between fish and fishes. Fish is used to describe one or a million individuals of one species. Whereas fishes is used to describe multispecies groups. So a mudsucker and a salmon are fishes.

W84

Page 3-72, ¶2. "These habitats are extremely dynamic in the warm shallows of San Diego Bay." What does this mean?

W85

Page 3-80, ¶2. "These coastal wetlands have suffered a tremendous decline in the recent past due to both direct and indirect impacts." Are they sinking into the ocean? What is happening? Is it a decline in species abundance, in species composition? Perhaps they are trying to say that the amount of coastal wetland area has been significantly reduced in the recent past.

W86

The report uses *raptorial* and *raptorial* interchangeably. Only *raptorial* is correct. Sometimes the report uses "unmitigable" and sometimes it uses un-mitigatable with a hyphen. No hyphen is needed but either way, they must be consistent.

W81

With regard to *Suaeda esteroides*, the term sensitive refers to this species' population status and distribution. In California, *Suaeda esteroides* is a rare plant with a limited distribution. Its population status is described as declining.

W82

In the DEIR the term sensitive refers to a species' population status and/or to a species' susceptibility to disturbance. Refer to the Sensitive Plants and Sensitive Wildlife sections of Volume II pp. 3-71 to 3-75.

W83

Comment noted.

W84

The description of the habitats as dynamic means that the location, extent and density of eelgrass beds change quickly in response to changes in environmental conditions.

W85

Coastal wetlands have declined in areal extent in the recent past due to direct and indirect impacts.

W86

Both Lincoln et al. (1982) and Barnhart (1986) use the spelling *raptorial*, and do not include *raptorial* as an alternative spelling. Text changes were made to exclude the latter spelling (Lincoln, R.J., G.A. Boxshall and P.F. Clark. 1982. A Dictionary of Ecology, Evolution and Systematics. Cambridge University Press, Cambridge, London, New York, New Rochelle, Melbourne, Sydney. 296pp; Barnhart, R.K. 1986. The American Heritage Dictionary of Science. Houghton Mifflin Company, Boston. 740pp).

a marina fronting any portion of the Bay or Gunpowder Point, adjacent to the National Wildlife Refuge.

We agree with the applicant's goal to restore existing degraded wetland habitat areas adjacent to the Sweetwater Marsh National Wildlife Refuge. Under #8, the project would provide Chula Vista with: add #F, a beneficial tax assessment district to fund the operation and management of the Chula Vista Nature Interpretive Center.

W75 Several of the proposed alternatives include public access to the water. This is unacceptable under any of the alternatives, because of the sensitivity of the Eel grass beds and access to the Sweetwater Marsh National Wildlife Refuge.

The encroachment from people being near wetland wildlife will have some effects. Many species will habituate to this disturbance and others will move elsewhere. The biological analysis shows that shading is not an issue in terms of productivity or effects on animals. This conclusion is warranted.

W77 The special study on flight patterns indicates that they are not significantly affected.

The birds tend to not fly over the Midbayfront; they fly over the wetlands and around its perimeters. The conclusion that flight patterns are not significantly affected is supported by the data.

While the Bayfront Conservancy Trust does not want to have the animal control and enforcement officers working directly for us, we would be glad to head a policy governing board for predator control. With the responsibility within Chula Vista going to the Chula Vista Police Department and Pest Control and within the Refuge, those officers should be responsible to the US Fish & Wildlife Service.

Some of the most important environmental issues include:

1. Control of nutrient inputs to the lagoons, wetlands and San Diego Bay;
2. Restricting the feeding of birds and other wildlife;
3. The source of lagoon water makeup;
4. Access to the beach;
5. Physical barriers in the buffers;
6. Seawater intake and discharge;
7. Predator perches and
8. Encroachment of humans and pets (cats & dogs)

SILLY LITTLE ERRORS

W79 Descriptions in the EIR of the native coastal sage plant communities state that certain species show dominance and these areas are dominated by such scrub elements as Flat-top buckwheat, etc. (e.g. p.3-70, ¶¶ 4&5) Most ecologists and all ethnologists would not use the term dominant (nor dominated and dominating) to indicate numerical abundance. Dominance connotes a behavioral superiority or inability to survive in the presence of or compete with other species. To describe abundance, the preferred term is predominant, meaning abundance rather than a competitive or social advantage.

Page 3-71, ¶2. "Numerous tidal channels meander through the marshlands both increasing the complexity of the dominating mid-marsh habitats." What does that mean? Similarly, Page 3-71, last ¶, "Vener pond previously dominated by open water."

W74 Comment noted. General language was added under #8 to specify that a City project goal is to provide a funding mechanism for the operation and maintenance of the Nature Interpretive Center.

W75 See Response B40.

W76 Comment noted.

W77 Comment noted.

W78 Comment noted. Refer to General Response 3.3.7.2.

W79 The following definitions indicate that "dominance" and "dominant" carry connotations of abundance. (Lincoln, R.J., G.A. Boxshall and P.F. Clark. 1982. A Dictionary of Ecology, Evolution and Systematics. Cambridge University Press, Cambridge, London, New York, New Rochelle, Melbourne, Sydney. 208pp).

"dominance: The extent to which a given species predominates in a community because of its size, abundance or coverage, and affects the fitness of associated species..."

"dominant: An organism exerting considerable influence upon a community be its size, abundance or coverage..."

"predominant: Of outstanding abundance or importance in a community."

W80 The first sentence to which the commentator refers means that the numerous tidal channels do two things: (a) they increase the complexity of the mid-marsh habitat, and (b) they provide unique resources for fish and invertebrate fauna.

If the misunderstanding concerns the meaning of the word *dominating* (as suggested by references to a second sentence of the DEIR "Vener pond previously dominated by open water"), see response to W79, which defines dominant.

W67

Under the analysis of significance, the 28 mitigation measures that are suggested, would mitigate most of the impacts of the project.

W68

Successful prohibition of pets in the development and parks, prohibition of kites, restriction of access to the Refuge and shore, prohibition of feeding wildlife and restrictions on chemical uses will require an extensive and effective educational program to ensure compliance. The Bayfront Conservancy Trust could be contracted to provide these educational services. All of the users of the development need to understand the critical importance of the wetlands surrounding the project.

ANALYSIS OF SIGNIFICANCE

W69 A primary concern of the effects of increased predator presence, specifically in the areas of wetlands fringing the Midbayfront is creating threats to nesting by Belding's savannah sparrows and Blackneck stilts. The most significant mitigation will be building design that does not allow for ledge perching on all of the faces facing the wetlands, an anti-roosting material. If those are done, the relative height of the buildings, because of shading, will not be so important. The potential for contaminant discharge is hard to evaluate at this time, more detailed studies and information are needed.

PARKS, RECREATION AND OPEN SPACE

W70

Public Access 3-156 "Though the site has not been approved to provide easy public access, the public can access the Bayfront from "T" Street, and from utilizing the Nature Interpretive Center." Then it says regarding public access "The proposed LCPR #8 text states that public access to the waterfront and natural areas should be maximized, in that key points of public access to the Bay and natural areas should be visible from a distance." The concern is public trespassing on the shore of the National Wildlife Refuge. The only place where there could be beach access is at the south end of the National Wildlife Refuge at the foot of "T" Street and the public should be totally excluded from walking along the beach. There really is limited opportunity for public access to the Bay.

W71

The parks on the north and west sides of the project front on the wetlands and the Bay and the northside park should definitely be passive type parks.

W72

The plan says that there will be 54 spaces for Nature Interpretive Center parking, this would be appropriate for the short-term, but these parking spaces must be built in Phase One of the development. Those 54 spaces are under the SDG&E right-of-way. The long-term parking requirements for NIC have been projected to be 150 permanent spaces. The LCPR #8 text provides a public parking for use by the Center located within the Midbayfront, including the small public parking lot (50 spaces) and bus shelter at the entrance to the Wildlife Refuge. The EIR does not identify the location of the remaining 46 spaces needed for NIC. We need bus shelters at both parking lots.

ALTERNATIVES

W73

Under the applicant's goals for the project area, #2--locate the project adjacent to San Diego Bay where there is an opportunity for the future development of a marina. It has been clearly stated by the US Fish & Wildlife Service that there is no opportunity for developing

W67 Comment noted.

W68 Comment noted. Refer to General Response 3.3.7.

W69 Comment noted. Design standards proposed by CVI include features to preclude the use of buildings as perches and nest sites (Section I of CVI's proposed "Design Requirements"). With regard to contaminant discharge, refer to General Responses 3.2.1.2, 3.2.3.10 and 3.2.3.11. See also Recommendation 9, pg. 3-112 of Volume II.

W70 Comment noted. This comment refers to an incorrect quote taken from the EIR text, see Pg. 3-148 of Volume II. The word "approved" should read "improved." The intent of this section in the EIR is to discuss the existing and future opportunities for the public to get to the bayfront, and to use the bayfront. In response to the comment, "The public should be totally excluded from..." there is no discussion of allowing people to walk along the beach in the text of the EIR. The LCPR No. 8 which was analyzed included bayfront parks, not beaches. Regarding trespassing on the National Wildlife Refuge, please read the Biology section of the EIR for information regarding the biological sensitivity of the Refuge, and the measures recommended to avoid unauthorized public access.

W71 Comment noted.

W72 The 54 spaces for the Nature Interpretive Center parking area will be required in Phase One of the development as a mitigation measure. Furthermore, based on the current operational needs of the Nature Interpretive Center, it will be recommended that the entire permanent parking space demand for this project (150 permanent spaces) be constructed in Phase One of the project. The long-term parking requirement for the Nature Interpretive Center, which is estimated to be 150 permanent spaces, will also be required as mitigation in the final EIR. The specific location of the parking lots as well as a determination regarding the potential requirement for bus shelters at each parking lot will be analyzed in the project-level environmental analysis.

W73 This comment is noted; the inclusion of the applicant's goals in the Alternatives section is not indicative of EIR support for their goals, rather, it is included to compare whether or not the alternatives meet the goals and objectives.

unacceptable. It is not in the self-interest of the BCT to have anything to do with enforcement within the marsh. Within the development, it is the sole responsibility of the City of Chula Vista Police and within the refuge, the US Fish & Wildlife Service. These officers should report to those agencies rather than to the Bayfront Conservancy Trust. The BCT could chair the policy committee and help determine the control activities but we do not want untrained officers on our staff.

W58 Annual funding will be needed for maintenance of trash control, drainage facilities, fencing, predator control and mitigation programs and should be explicitly provided for as an element of the LCP.

W59 Requirement 19 specifies the creation of additional salt and brackish water marsh habitat within F & G Street Marsh and the area between the F & G Street Marsh and San Diego Bay, of not less than 3.5 acres of brackish marsh and 4 acres of saltmarsh. This would be an enhancement to the wetlands. On the National Wildlife Refuge it will have to be approved and coordinated by the US Fish & Wildlife Service. On City property, between F & G Street Marsh and the San Diego Bay, such permission would not be required.

W60 If tidal flushing is enhanced by a crossover under crossing of Marina Parkway^a, a large half-round corrugated culvert of a 10 foot or more radius is suggested. It would be better to use a rectilinear, concrete box culvert to facilitate Clapper rail crossing. It is important that the rails be able to see completely through the pipe. It has not been established that Clapper rails will cross through a corrugated culvert. If the conduit is dark and there is not a direct line of sight to the other side, it is known that rails will not cross.

W61 Requirement 20 says "No further dredging, structural changes or proposed uses should be allowed to occur along the mudflat and marshland areas of the bayfront." This is a great idea, but these specific impacts will occur if a seawater system is installed.

W62 Requirement 22 says "Buildings facing marshlands should not include extraneous ledges upon which raptors can perch or nest." This is a good idea and if this is in fact done, then the additional masses of the buildings will be irrelevant in terms of adding additional perches.

W63 Roof peaks and crests exposed to the wetlands should be covered with an anti-perch material such as nixolite. The anti-roosting material ~~catches~~ is much more effective and has received more approvals and endorsements than nixolite.

W64 Park Uses. All border parks along the E Street Marsh, the Vener Pond area and the F & G Street Marsh, should be passive use. They should use native vegetation and should include physical barriers. Public interpretive programs should be promoted and the Bayfront Conservancy Trust could be contracted to help provide and review the interpretive text and graphics.

W65 The EIR #26, page 3-115, calls for new marshland, mudflat and salt pond habitats totaling not less than 13.2 acres, to be created on the more isolated western portions of Gunpowder Point with marsh linkage to both the E Street Marsh and the Sweetwater Marsh, to aid in offsetting impacts associated with encroachment, predation and loss of habitat use by avian species. This is a major marsh creation project that would definitely need extensive approval and design consultation with the US Fish & Wildlife Service.

W66 It is inappropriate for this report to be calling for a one-to-one ratio of habitat impacted and replaced. Whatever the ratio is should be the purview of the US Fish & Wildlife Service, not the environmental consultants preparing the EIR.

W58 This measure is included as #18 in the biological mitigation measures.

W59 Comment noted. Approval by and coordination with Rohr Industries would, however, be required to undertake enhancement work on their property west of Marina Parkway.

W60 See Response B2. We disagree that a rectilinear, concrete box culvert would perform better as a wildlife crossing than would a corrugated culvert with a radius (note radius, not diameter) of 10 feet or more.

W61 At present, groundwater is the proposed source of water for the lagoons, with seawater withdrawal from the Bay as the optional source. There is considerable agency opposition to a seawater intake. Refer to General Responses 3.3.7.2, 3.2.2.3, 3.2.2.4 and 3.2.3.1.

W62 Comment noted.

W63 Refer to General Comment 3.3.7.2.

W64 Comment noted. Refer to General Response 3.3.7.2. Also, design standards proposed by CVI include the installation of overlook areas to allow views of portions of the National Wildlife Refuge (Section IV. Control of Human Activity of CVIs proposed "Design Requirements").

W65 Comment noted.

W66 In fact, under CEQA, it is within the purview of the lead agency (the City of Chula Vista) to determine appropriate mitigation measures for identified impacts. As consultants, acting in a review capacity for the City of Chula Vista, the specific reason for our work on this project is to identify existing environmental conditions, review the project to determine and report any impacts, suggest methods of impact avoidance, and identify any suitable measures to offset unavoidable impacts. This process allows for public review and comment, full environmental disclosure, and informed decision-making by the lead agency.

MITIGATION MEASURES

W50

Requirement 1 on page 3-112, says that "the proposed project should include low flow diversions from the freshwater detention basin into the direct-to-bay delivery systems, such that unseasonable freshwater drainage is not allowed to pass through the F & G Street Marsh." Unseasonable freshwater drainage means wet weather flow and it would not be a low flow diversion. The time the marsh needs water is during dry, low flow periods, not during wet season storm drainage conditions. Under wet season storm drainage conditions, the marsh gets water through collateral sources. The wet weather flows are the ones that tend to carry the highest concentrations of sediments and pollutants.

W51 Nutrient trapping or stripping to remove the nitrogen and phosphorous compounds before they are introduced either into the lagoon or the Bay should be considered under requirement 2.

W52

Requirement 4 deals with long term silt removal. We do not know the design of the clean-out structure of the detention basin. This kind of a sediment trap is easy to clean out if it is a concrete box structure that you can use a backhoe or a bucket to clean. Conversely, if it is mud bottom, it is much more difficult and expensive to clean. This requirement says that "long term silt removal maintenance of the detention should not be conducted following the initial construction phases of the proposed project." This is illogical. Effective sediment traps catch sediments and fill up. If they work, they will have to be cleaned out periodically.

W53

Requirement 5A is an excellent recommendation to use subtidal drainage at a depth of 10 feet below mean low/low water. Number 5A is by far the preferred choice over #5B.

W54

Requirement 6 outlines some groundwater studies to check for salinity and contaminant concentrations and then mentions a saltwater intake and outlet. One of the potentially significant impacts of seawater withdrawal from the Bay would be fish entrainment and impingement. Studies are definitely needed and the project proponent needs to make a decision between freshwater makeup and saltwater makeup for the lagoons.

W55

The desilting basins during construction are a good requirement. The recommendation on the controlled use of fertilizers, pesticides and herbicides is a good one, as well as applications by certified landscape contractors. The restriction on plant materials is a good one. It is a good requirement to have "no pets" areas for the development and parks. The closed garbage containers are also a necessity and highly recommended. Open garbage receptacles are strong attractors of birds and other scavengers.

W56

Requirement 15, restriction of human access to the marshlands and the west side of the buffer zones is absolutely essential. The best way to accomplish this will be through physical barriers. A resident management plan is a good requirement.

W57

Requirement 17 suggests "a full-time enforcement staff of two or more officers, funded by the revenues generated within the Bayfront, to conduct predator management program, insure compliance, issue citations, conduct routine checks to insure maintenance of other mitigation requirements. The officers should work closely with the US Fish & Wildlife Service on enforcement issues." This is a good idea, however, the suggestion that these officers be accountable to the multi-representative Bayfront Conservancy Trust is

W50 Unseasonable fresh water drainage is intended to mean incidental flow during the summer (dry) season. These flows are from sources such as irrigation runoff, car washing and similar activities. The proposed desilting/detention facility north of the "F" & "G" Street Marsh will be available to contain these low-volume, unseasonable

fresh water flows, and not allow them to pass through the "F" & "G" Street Marsh. Refer to General Response 3.2.11.

W51 Comment acknowledged. Refer to General Responses 3.2.1.1 and 3.2.1.2. Refer to Letter Response A.1.

W52 Design of cleanout structure: Refer to Letter Response B29. Maintenance of the detention basin: Comment acknowledged. Original text of the DEIR is in error.

Requirement 4 on PG. 3-111 of Volume II has been changed to read "Long-term silt removal maintenance of the detention basin should not be necessary following the initial construction phases of the proposed project." Refer to General Response 3.2.1.1 (Desilting Facility).

W53 Comment acknowledged.

W54 Comment acknowledged. Refer to General Response 3.2.2.3.

W55 Comment acknowledged.

W56 See Response W52.

W57 See General Response 3.3.8.2.

drainage was discharged subtidally. Subtidal discharge would also reduce the amount of freshwater flow and salinity alteration.

Significant, mitigable impacts to Eel Grass beds would be expected to occur resulting from the placement of the drainage pipes. Sedimentation can be dealt with by upstream sediment traps and pollutants by oil traps and possibly nutrient traps. Another way to do this would be to discharge in a subtidal area.

Impact to Mudflats

W46

The report only deals with effects of a seawater system as related to construction. Significant potential impacts of the system could be related to its operation in terms of the amount of water that is withdrawn and returned to the Bay and what chemicals are added into the lagoon while it is operational and what is done at the withdrawal (intake) site to minimize fish entrainment and impingement. Entrainment and impingement of fishes can be minimized by using a Johnson Wedgewire Screen on the intake. The location of the discharge is important to the operation of NIC's seawater system and will need to be evaluated at the project level.

The report discusses alternative project impacts and says six separate project alternatives have been proposed. Each of these vary in some degree from the proposed project. It is true that any beachfront development will include certain features which will have similar adverse biological impacts.

W47

Existing Approved LCP Alternative 2
The EIR concludes that this alternative would result in "similar impacts to those of the proposed project with the exception of creating significantly fewer impacts of predator threats to marsh bird foraging and nesting activities, through reduced building mass." However, if birds are unable to perch or nest on any of the ledges or sides of the building, there would not be a reduction if the relative roof area is the same. Alternative 2 does not have the pond and would not have some of the positive benefits to migrant and resident birds.

Alternative 3 Reduced Density

Page 3-110, sentence 4, is nonsensical. It says "this would likely lead to reductions in the impacts of avian predator threats to marshland birds, however, this would not result in significant reductions in either avian or mammalian predator concerns." It just said that it would reduce the avian predator impacts and then it says it would not. This sentence does not make sense.

Mitigation measures to mitigate several significant impacts identified in the report:

- (1) Increased freshwater input
- (2) Contaminant discharge
- (3) Sediment accretion and erosion
- (4) Human/pet presence
- (5) Alteration of predator competition/prey regimes
- (6) Alteration of habitat use areas
- (7) Alteration of Eel grass
- (8) Alteration of mudflats
- (9) Construction impacts

Under Contaminant Discharge #2, nutrient inputs into the Bay and water features of the project need to be controlled. A significant impact has been left out: Water withdrawal effects on groundwater and those associated with an offshore seawater system.

W46 At present, groundwater is the proposed source of water for the lagoons, with seawater withdrawal from the Bay as the optional source. There is considerable agency opposition to a seawater intake. Refer to General Responses 3.2.2.3, 3.2.2.4, 3.2.3.1 and 3.3.7.2.

W47 Comment noted.

W48 The referenced sentence means that threats from avian predators would be reduced somewhat if the buildings were set back from wetlands and building massing was decreased, but such measures would still not offer significant alleviation of predator concerns. More measures would be needed to reduce predator impacts to less than significant levels; hence the design standards to preclude raptor perching on man-made structures, and the proposed predator management program (Section I. Reduction of Predation Pressures of CVI's proposed "Design Requirements").

W49 Comment acknowledged regarding contaminant discharge. Refer to General Responses 3.2.1 and 3.2.12. Refer to Letter Response A1. Water withdrawal effects on groundwater. Refer to General Responses 3.2.3.3 through 3.2.3.5. Refer to Letter Response T8. Offshore seawater system. Refer to General Response 3.2.3.1.

of scavengers, including gulls, ravens, raccoons and opossums. And, increasing the number of avian predator roosts. These environmental changes are considered significant and are mitigable.

Lighthotted Clapper rail

All ground-nesting birds including Clapper rails, Least terns and Belding's savannah sparrows are particularly susceptible to predation by cats, dogs, skunks and raccoons.

W42 An important and potentially significant impact will be on Clapper Rails from the proposed wetland enhancement on the F & G Marsh, which could lead to roadkills of Clapper Rails crossing Marina Parkway. Any crossings should be via rectilinear concrete box culverts. The significant impacts are increased predation, principally from feral cats and dogs brought by the development. Also, disturbance from humans and pets could have a significant effect on rails. These impacts are considered significant and mitigable, with exception of the predator threats associated with building mass and placement, which are considered significant and unmitigable under the proposed project. Those effects can be mitigated through the elimination of predator roosts near the wetlands.

Peregrine falcon

It is interesting to note that the treatment of Peregrine falcons says that the proposed development would provide additional perching and roosting sites, which would benefit the falcon. "However, due to conflicting issues related to the presence of other endangered birds which may fall prey to falcons, the promotion of this species is not considered to be a benefit to the overall ecology of the area. And, more specifically, to the other endangered birds which are more restricted in their habitat requirements than is the Peregrine." This is a very difficult issue of trying to balance the competitive needs of rare and endangered species and it should be noted that if the public is given a choice to choose between Least Terns, Clapper rails and Peregrine falcons, the public will time and time again choose the beautiful, powerful Peregrine, over the other two species. The report is making a value judgement saying that the falcon is not as important as Clapper rails or Least Terns. The management of endangered species is the responsibility of the USF&WS.

W44

Belding's savannah sparrow.
It notes that these birds are susceptible to human and pet impacts and also susceptible to predation at or near the nest by mammals and reptiles. It says that the proposed project is expected to have significant impacts on the enhancement of predator activities and increased harassment and predation by humans and pets, especially cats and the modification of habitat use areas. The report concludes that these impacts can be substantially reduced by the implementation of a predator management program and the creation of new habitat to compensate for loss of value due to the encroachment of predators.

"The remaining impacts would be considered to be significant and unmitigable." This is not necessarily so, there is plenty of upland habitat for Belding's savannah sparrows on Gunpowder Point. Additional habitat could be created or enhanced, with the occurrence of the USF&WS, and there would be plenty of area to support a healthy population of Belding's savannah sparrow. There will be some negative effects on Belding's Savannah Sparrows on the west side of Vener Pond but these could be compensated for elsewhere on the Refuge.

Impacts to Del Grass

The storm drain outlets are designed to empty at the top of the existing mudflat and run over the surface of the flat at low tide. It would result in fewer environmental effects, if this

W41 Comment noted.

W42 Comment noted. Also refer to General Response 3.3.7.2 Sections I. Reduction of Predation Pressures and IV. Control of Human Activity to Reduce Impacts on Wildlife, of CVTs proposed "Design Requirements." We disagree that increased predation is a mitigable impact for reasons discussed in Alteration of Predator/Competition/Prey Regimes on pp. 3-91 to 3-97 of Volume II.

W43 We are not implying that Peregrine Falcons are less important than Least Terns or Clapper Rails. We are saying that because the habitat requirements of Peregrine Falcons are more readily satisfied at more extensive areas, it would be prudent to manage for Least Terns or Clapper Rails preferentially over Peregrines.

W44 Impacts were originally considered unmitigable because building design details required for the evaluation were not forthcoming from the applicant, and it was uncertain whether or not the proposed buildings could be raptor proofed. With building design standards now proposed by CVT, predation impacts through the use of buildings as perches by raptors are now considered mitigable with regard to Clapper Rails (see also General Responses 3.3.3 - 3.3.3). The required design standards for raptor proofing buildings are specified on pg. 3-114 of Volume II. With regard to Belding's Savannah Sparrows, see Response B24.

W45 Comment noted. Refer to General Responses 3.3.7.2 and 3.3.8.1.

W45

The storm drain outlets are designed to empty at the top of the existing mudflat and run over the surface of the flat at low tide. It would result in fewer environmental effects, if this

project includes a dam to contain the lagoon and separate it from the Bay and the dam has pedestrian access, a barrier must prevent people from accessing the beach and Refuge.

Page 3-100, ¶3, says "The results of this analysis indicated that the perceived threats might be expected within the buffer zones of the wildlife refuge, but these threats would not be expected to extend into the sensitive wetland areas." Then the next paragraph says the impacts of the project on the existing balance of competitors, predators and prey are considered to be significant. If they do not extend into sensitive wetland areas, how can they be significant? They can only be significant if there are endangered species within the buffer zones.

W33

Page 3-100, ¶5, "it is probable that the predominate impacts will be restricted to the disturbed lands and fallow agricultural fields. This area would be replaced by approximately 10 acres of deepwater salt pond habitat." What constitutes "deep water"?

W34

Page 3-101, ¶4, "The incision of sheltered pond environments expected to promote the presence of waterfowl, particularly mallards and coots." While this is true, feeding of waterfowl by the public through breadcrumbs and other unnatural foods, will result in large populations of birds and tremendous nutrient loading of phosphorous and nitrogen compounds to the lagoon and lead to water quality management problems. Such feeding is harmful to the wildlife. Feeding of wildlife should be prohibited in all parts of the development.

W35

Page 3-101, ¶5, "it is probable that the predominate impacts will be restricted to the disturbed lands and fallow agricultural fields. This area would be replaced by approximately 10 acres of deepwater salt pond habitat." What constitutes "deep water"?

W36

Page 3-101, ¶4, "The incision of sheltered pond environments expected to promote the presence of waterfowl, particularly mallards and coots." While this is true, feeding of waterfowl by the public through breadcrumbs and other unnatural foods, will result in large populations of birds and tremendous nutrient loading of phosphorous and nitrogen compounds to the lagoon and lead to water quality management problems. Such feeding is harmful to the wildlife. Feeding of wildlife should be prohibited in all parts of the development.

W37

The EIR concludes that shading of the wetland area from the tall buildings would not significantly affect the primary productivity of the marsh. This conclusion is warranted. Shading effects will also be nonsignificant for both macroinvertebrates and terrestrial insects. It is highly unlikely that there could be any significant effects on invertebrates because they are mobile. Shading will not effect them because they have the option to move to areas that are unsaded. Prohibiting the flying of kites should be incorporated into the development's CCRs.

Threatened and Endangered Species

W38

Saltmarsh bird's beak
The populations of this plant are sufficiently removed from the development to not be affected by it.

W39

California Least Tern
It is expected that pelicans would roost or loaf on the proposed dam for the 10-acre lagoon. There is concern about the smell and the appearance of fecal material from pelicans. Another significant potential impact would be if the feces are washed into the lagoon and become a source of nutrient loading. Railings and fences around the perimeter of the marsh and around all water features should be designed to prevent bird roosting or loafing.

W40

D" Street Fill, and it needs foraging areas fairly close to the nesting colony. The project is expected to alter the predator regime in the local area, by increasing the concentrations

W33 The two statements that are referenced were not made in relation to each other.

The first statement "The results of this analysis..." concerns the expected distance that the zone of influence of perceived threats will extend into the Refuge. The second statement concerns real predator threats associated with raptor perching on the buildings. Such effects are considered to be significant. We do not agree that impacts must extend into the sensitive wetland areas to impact endangered species before the impacts due to the development are considered significant. For example, refer to General Response 3.3.4.3.

W34 Refer to Recommendation 26 on pg. 3-115 of Volume II.

W35 We define "deepwater habitat" as that where the water depth is too great to be suitable for shorebird or wading bird foraging activity, and too deep to support the growth of emergent plants. Such deepwater habitats are typically utilized by waterfowl and terns.

W36 A prohibition on the feeding of wildlife is an excellent suggestion which should be incorporated into the general guidelines of a predator management program. With regard to nutrient loading of the lagoons, refer to General Response 3.2.2.4.

W37 Comment noted. The prohibition of kite flying activities is addressed in Recommendation 24 on pg. 3-115 of Volume II.

W38 This conclusion has already been stated in Volume II, pg. 3-103.

W39 Comment noted. Refer to General Responses 3.2.2.4 and 3.3.7.2.

W40 We disagree that the changes to predator regimes are mitigable for reasons discussed in Alteration of Predator/Competition/Prey Regimes on pp. 3-91 to 3-97 of Volume II. The creation of avian predator roosts and perch sites will be prevented under design standards proposed by CVI. Those design standards are included as mitigation measures on pg. 3-114 of Volume II. Mitigation measures dealing with predators in general are located on pp. 3-112 through 3-114.

the project site. The fewest birds are present during the summers months but this is also the nesting time for Clapper rails and Least terns.

W26

Biology
This is the most significant section of the LCP in regards to the project's effects on the wetland resources. In terms of existing conditions, the most valuable natural resource areas are those encompassed within the Sweetwater Marsh National Wildlife Refuge. The only significant habitat within the Midbayfront area is a reestablished freshwater brackish/seasonal marsh. That area is scheduled to be a destination basin but could still function with some freshwater and brackish wetland values. However, the more bird use it receives, the harder it will be to maintain its water quality.

W27

Page 3-86, ¶2 "One hundred and forty five pairs (Belding's Savannah sparrow) are known in the Sweetwater Marsh complex." There is no way of knowing that since 145 pairs were found in 1986, that there are still 145 pairs present. It is incorrect to say that "Sweetwater Marsh hosts a density of 2.3 pairs per hectare today and 5.2 percent of the State's total number of Belding's Savannah sparrows." The last sentence of the same paragraph says "Due to the timing conditions under which the surveys were conducted, no population estimates for this species have been made." This is a direct contradiction to the first sentence that says "145 pairs are known in the Sweetwater Marsh complex."

W28

Page 3-86, ¶5 "Additional sensitive wildlife observed on the site, these species are either rare on the site and do not utilize the habitat regularly, are only sensitive on their local breeding grounds." It is hard to understand this. They are only sensitive on their local breeding grounds?

W29

Page 3-87 under Drainage Basin, shows that the development will have an internal drainage to the lagoons of 11.0 developed acres. If this drainage does not contain oil and grease traps and nutrient traps, the nitrogen and phosphorus loading in this lagoon is going to result in a high propensity for algal blooms and it will become anoxic and dystrophic. A related concern is nitrogen and phosphorus loading from bird feces.

W30

Pages 3-87 and 3-88, "The increased freshwater input..." It mentions input of freshwater originating from irrigation runoff, automobile washing, street and sidewalk cleaning. These types of freshwater inputs invariably will carry pollutants and nutrients with them. These types of inputs will make the water quality management of the lagoon, the surrounding wetlands and the San Diego Bay, more difficult. Some ways to mitigate the effects of fertilizers, pesticides, herbicides and other chemicals would be: (1) Through public education, (2) The developer's CCR's can specify which chemicals can be and can not be used and (3) the sediment traps could include nutrient stripping capabilities.

W31

Page 3-93, ¶5, sentence 3, "For all other practical purposes, the remainder of the inner bayfront regions would exceed 25 feet in height with street parking lot lighting, low buildings, landscape, etc." The word "not" has been left out there and they mean would not exceed 25 feet.

W32

Page 3-96, it is evident that waterfront use will increase with the development. To keep people from making beach landings on the Sweetwater Marsh National Wildlife Refuge, it may be necessary to post a buoy line offshore with no trespassing signs. It is clear that the potential impacts of increased human and pet presence are significant and adverse. The best mitigation would be what has always been proposed within the bayfront design, for the buffer zones to have physical, impenetrable barriers including both water and fence features. This would keep most feral cats, dogs and humans out of the wetlands. If the

W26 We concur that the Sweetwater Marsh National Wildlife Refuge is an extremely valuable natural resource area. We disagree, however, with the contention that the seasonal marsh is the only significant habitat within the Midbayfront area. Refer to pp. 3-98 through 3-100 of Volume II, and to General Responses 3.3.4.2 and 3.3.4.3.

The detention pond can function with some wetland values. Refer to Recommendation 19, pg. 3-114 of Volume II. We concur that the more bird use the detention pond receives, the more difficult it will be to maintain water quality. Though nutrient input specifically from birds feces is not discussed in the DEIR, nutrient loading is discussed on pg. 3-80 of the DEIR. With regard to the inclusion of nutrient traps in the drainage system, one of the purposes of the detention basin is to function as a nutrient sink. Lush plant growth in the detention basin is acceptable.

W27

The estimate of 145 Belding's Savannah Sparrows (*Paserculus sandwichensis beldingi*) is the most recent available, and will be used until new information is available. For our analysis, it was not necessary to obtain a full population estimate. The statements identified as contradictory are not contradictory. The statement "Due to the timing and conditions under which the surveys were conducted, no population estimates for this species have been made" refers to the activities of PSBS, while the statement "One hundred and forty five pairs are known from the Sweetwater Marsh Complex (Zembal et al., 1988)" refers to information in Zembal et al. (1988). Refer to Belding's Savannah Sparrow Inventories on pp. 30-31 of Appendix C, Section II.

W28

These species are either (a) rare on the site and do not use the habitat regularly, or (b) sensitive only on their local breeding grounds, or (c) vagrants on the site during migration.

W29

Refer to Recommendations 2, 3 and 4 on pg. 3-111 of Volume II, and to design standards proposed by CVI (Section V, Reduction of Potential Adverse Effects on Water Quality of CVI's proposed "Design Requirements"). Refer to General Response 3.2.2.4.

W30

See Response B38, and refer to General Responses 3.2.2.4, 3.3.7.2, and to design standards proposed by CVI (Section V, Reduction of Potential Adverse Effects on Water Quality of CVI's proposed "Design Requirements").

W31

This correction has been made to the EIR text.

W32

See Response B24 and B40. We recognize the potential for significant negative effects of public access to the beach and to marshlands. Fencing and signs to restrict human access to marshlands and buffer areas are specified in Recommendation 15, pg. 3-113 of Volume II. Physical barriers between the development and wetland areas are incorporated into design standards proposed by CVI. Those design standards are included as mitigation measures on page 3-111 to 3-114 of Volume II.

(DREP). Those compounds are soluble in water and will not be removed by the proposed sediment traps. Slowing the flow rate will not contain them.

W20 There are insufficient data to determine the potential effectiveness of the sediment traps. We need to know how they will be designed and constructed. Sediment traps containing concrete boxes are much easier and cheaper to clean than are natural bottom ponds. A total of 34.5 acres will still drain into the San Diego Bay, but are to flow through storm drains with oil and grease traps. However, these oil and grease traps will not stop soluble nutrients from flowing into the Bay and this will result in nutrification and pollution of the Bay.

W21 All five project alternatives contain these same significant issues: siltation, chemical contamination, degradation of water quality from surface runoff of pesticides, fertilizers, oil, grease, etc. and the potential of contaminated groundwater. Those can be mitigated as already mentioned. All of the proposed mitigation measures on pages 3-20 and 3-21 should be implemented.

View Shed Analyses

W22 The only view analysis that is pertinent to the operation of the Nature Interpretive Center is KOP #1(key observation point)- from the Chula Vista Nature Interpretive Center. This is a representative view east and southeast, into the MidbayFront, for visitors to the National Wildlife Refuge and the Interpretive Center.

W23 The proposed project would introduce urban forms within the foreground distance zone of the KOP #1. "The visual aesthetic impacts from this viewpoint are considered significant since the project will change the overall character of the view from a predominantly natural and scenic wetlands setting, to one of intense urban development." It is important to note that all of the alternatives would have the predominance of the development in the view from the Nature Interpretive Center, with the natural and scenic wetlands in the foreground. One of the goals of this project is to balance development and conservation, obviously the MidbayFront is going to be developed and the view on the other side of the marsh is going to be that of a developed area.

W24 The EIR states that in alternative #5 the overall visual impacts are substantially less than those of the proposed projects. The only significant difference between the proposed project and #5, in terms of view shed, is that the height of the buildings are reduced. The fact that you have the buildings in the background is not changed and the view is essentially the same except for the 120 foot high luxury hotel. All of the heights of the other buildings are simply reduced and the same wall of development occurs. There is some view through the development at the south end of the apartments and the office complex area. The certified LCP view is monotonous and uninteresting. A development with varied building heights is visually more attractive. In any case there is going to be a wall of development behind the wetland resources.

W25 Since it was not the direction of the Bayfront Conservancy Trust, this review does not consider any of the other key observation point views. This review does not deal with Section 3.4 Conversion of Agricultural Lands, nor with Section 3.5 Air Quality. Regarding Section 3.6, the only consideration of noise would be the impacts of the construction of the development and the actual habitation of the development on the wildlife within the wetlands. We agree that construction cannot be performed without making noise and that it's more important to avoid sudden, loud equipment noise and intermittent noise, rather than continual or elevated noise above a steady or rhythmic noise background. The most effective wildlife impact mitigation is to schedule the noisiest construction activities when the birds are least likely to be breeding or nesting near or on

W20 Design and effectiveness of sediment traps; Refer to General Responses 3.2.1.1 and 3.2.1.2. Refer to Letter Comments A1 and B29.

W21 Comment acknowledged. Additionally, these mitigation measures have been amended as appropriate to reflect new information made available subsequent to release of the DEIR. Refer to Section 3.2 of the DEIR, Volume II for these changes.

W22 Comment noted.

W23 Comment noted. Although all the alternatives would be visually evident and introduce urban development within the foreground distance zone of the Nature Interpretive Center, Alternatives 7 and 7A are less dominant from the Nature Interpretive Center and would not overwhelm the views to the wetlands and marshes.

W24 Comment noted.

W25 Comment noted. See Response B42.

W14 changes of the local coastal plan is redesignating of open space on all City Plans for the "D" Street fill and Gunpowder Point, to accommodate the National Wildlife Refuge as an open space area. The Bayfront Conservancy Trust supports this action.

W15

The second major change is to Midbayfront subarea 1, which will permit new uses, as well as more intense levels of existing land uses in the area than are currently allowed in the LCP. The EIR focuses on the analysis of impacts resulting from this second change, specifically of the development plan for the subarea as proposed by Chula Vista Investors. It is this plan that is considered by the EIR for evaluation of potential environmental impacts from the development.

W16 There is a potential for significant negative effects to result from public access on the beach. A physical barrier will be needed to keep people off the beach along the National Wildlife Refuge. The wetland set backs along the perimeter of the development, as outlined on pages 2-4 and 2-5 for the wetlands buffer, should be sufficient to protect wetland resources, provided that the buffers contain impenetrable physical barriers to keep feral cats, dogs and people from entering the wetlands.

W17 The total proposed development plan consists of approximately 4.2 million square feet of building space and the existing approved LCP allows up to 2.5 million square feet. So the proposed development is approximately 1.7 million square feet greater than the current maximum allowable density in the Bayfront area.

The EIR evaluates seven different alternatives:

- (1) No project alternative
- (2) Development under the existing certified LCP
- (3) Reduced density which is called the mid-range alternative--a 26 percent density decrease from the developer's proposal¹
- (4) Reduced density No. 1-A, a 26 percent density decrease with a slightly different land use pattern
- (5) Reduced density No. 2, within an intensity range of existing Midbayfront land uses, a 47 percent density decrease from the developer's proposal.
- (6) The possible location alternatives
- (7) Reduced density No. 3 with a modified design

W18 In addition to the development being environmentally sensitive, such that it does not affect the wetland resources, it is important that it be economically feasible. It must be profitable to be able to pay its annual tax assessment fees to the BCT and thereby insure the ongoing operation of the Nature Interpretive Center.

ENVIRONMENTAL IMPACT ANALYSIS

Hydrology/Water Quality

W19 Approximately 50 acres of the development, which would have drained into the San Diego Bay, has been redirected into a proposed detention basin, adjacent to the F & G Street Marsh. The EIR states that the sediment traps will attenuate flood peaks and help control the flow of sediment and chemical pollutants into both the F & G Street Marsh and San Diego Bay as storm runoff will leave the detention at a slower, controlled rate. Even though the water leaves at a slower, controlled rate, the discharge of soluble nutrients will not be stopped. Particular attention to the control and management of Nitrite (NO₂), Nitrate (NO₃), Phosphate (PO₄), Ammonia (NH₃) and Dissolved Reactive Phosphorus

W14 This comment is noted, and is not relevant to the EIR's adequacy.

W15 This comment is noted, and its content is described in both the Introduction and Project Description of the EIR.

W16 See Responses B24 and B40. We recognize the potential for significant negative effects on public access to the beach and to marshlands. Fencing and signs to restrict human access to marshlands and buffer areas are specified in Recommendation 15, pg. 3-113 of Volume II. Physical barriers between the development and wetland areas are incorporated into design standards proposed by CVI (section on Reduction of Predation Pressures of CVI's proposed "Design Requirements").

W17 This comment is noted, and is not relevant to the EIR's adequacy.

W18 This comment is noted and is not relevant to the EIR's adequacy.

W19 Refer to General Response 1.1. Refer to Response A1.

- (3) California least tern
- (4) Lightfooted clapper rail
- (5) Peregrine falcon
- (6) Belding's savannah sparrow
- (7) Construction impacts

Sub-issue: Marine resources

- (1) Eel grass
- (2) Mud flats
- (3) Construction impacts

Issue: Land Use, General Plan Elements, Zoning

Sub-issue: Land use, impact description, compatibility between internal land uses and with refuge

Table 1-2 Mitigation Measures

The list of feasible mitigation measures are quite good. Some specific comments follow.

W11 Hydrology and Water Quality

Studies should address the effectiveness of proposed oil and sediment traps as well as that of the detilting base in removing both sediment and chemical pollutants from the F & G Street Marsh and ultimately the San Diego Bay.

W12

Under hydrology, the EIR says that "water quality traps for contaminant control must be approved by the City Engineering Department before they may be installed. The City Engineering Department must verify that all EPA and any regional water quality control board standards are met." While some contaminants mentioned in the EIR, cover runoff from the development and it mentions fertilizers, no attention is given to nutrients which come from fertilizers and detergents. Deterioration of water quality in the lagoons, wetlands and San Diego Bay will come from the various Nitrogen and Phosphorus compounds contained in fertilizers and detergents. Particular attention to the control and management of Nitrite (NO_2), Nitrate (NO_3), Phosphate (PO_4), Ammonia (NH_3) and Dissolved Reactive Phosphorus (DRP) inputs must be given. These chemicals are soluble in water, seldom adhere to particulates and will not be removed by the proposed sediment traps. The operation of the detention basin upstream of the F & G Street Marsh is intended to maintain water quality but nutrients are not properly addressed.

Project description

W13 Page 2-2, ¶2 "The refuge was established because of unique wetland components which provide nesting and/or foraging for over 100 species of birds." Survey's conducted over many years and those performed by the EIR's biological consultants show that there are 196 species of birds which have been observed in the area. Consequently, it is appropriate to say that the "The refuge was established because of unique wetland components which provide nesting and/or foraging for over 100 species of birds." Appendix C, Biological Resources - Midbayfront, Table 2. Animals observed or detected along the Chula Vista Mid-bayfront, does not include three species of birds known to occur in the area. While they may not have been observed by the consultants, the surfbird, (Apliza virgata), Black-chinned hummingbird (*Archilochus alexandri*) and Sage thrasher (*Oreoscoptes montanus*) are known to occur in the area.

The proposed project is the resubmittal of the LCP which consists of changes in the land uses and maps of the LCP itself, which was the original LCP of 1985. One of the major

W11 Effectiveness of oil and sediment traps: Refer to General Responses 3.2.1.1 and 3.2.1.2. Refer to Letter Response A1. Effectiveness of desilting basin: Refer to General Responses 3.2.1.2.

W12 Nutrients in runoff: Refer to General Response 3.2.1.1 and to Letter Comment A1. One of the purposes of the detention basin is to function as a nutrient sink. Refer to General Response 3.2.2.4.

W13 Pg. 2-1 of the Project Description in Volume II has been modified to include the correction.

offshore intake for saltwater to provide makeup water for the lagoons would avoid groundwater availability and quality problems.

W9 At this time, not enough information is available to analyze this important issue as it relates to biological resources. Additional studies are needed. Pumping costs and the effects of large-scale groundwater withdrawals should be determined. At the project level, it is clear that the proponent is going to have to make a decision between groundwater or baywater makeup for the lagoon and perform the needed analyses. Once the studies are done, the associated impacts can be evaluated.

SUMMARY OF IMPACTS AND MITIGATION

W10

The LCPR No. 8 proposes to change land uses under the existing certified LCP to open space which would be consistent with the establishment of the Sweetwater Marsh National Wildlife Refuge. The Bayfront Conservancy Trust supports this change. The EIR repeatedly states that all mitigation measures should be implemented and monitored via a mitigation monitoring program. The monitoring program should be a requirement.

TABLE 1-1. Chula Vista LCPR No. 8 Impact Matrix.

This review deals with the specific issues listed below and their effects on NIC and the wetlands:

Issue: Hydrology and water quality

Sub-issue: Water quality, impact description, urban surface run-off, siltation and chemical contamination

Sub-issue: Water quality, impact description, groundwater extraction, lagoon contamination

Issue: Visual aesthetics, community character

Sub-issue: Chula Vista Interpretive Center (KOP 1), impact description, visual urban dominance of important natural setting.

Issue: Biology

Sub-issue: Drainage and water quality, impact description

- (1) Increase freshwater impact
- (2) Contaminant discharge
- (3) Sediment accretion and erosion
- (4) Construction impacts

Sub-issue: Wildlife resources

- (1) Avian flight patterns
- (2) Human pat presence
- (3) Alteration of predator competitive prey regimes

- (1) Changes in land use
- (2) Avian predator enhancement

Sub-issue: Wildlife resources, impact description, alteration of habitat use areas

- (1) Incremental loss of raptor foraging areas
- (2) Creation of sheltered pond habitat

Sub-issue: Threatened and endangered species, impact description, effects of habitat shading

- (1) Salt marsh bird's beak
- (2) California brown pelican

W9 Comment acknowledged.

W10 Comment noted. Refer to General Response 3.3.7.2.

a us, the tremendous contribution of the other areas which constitute foraging area for the same species. Furthermore, the loss of the midbayfront to development is not significant because it is not a change to the currently certified LCP which zones the midbayfront for development.

W3

While it is true that the development area would result in the loss of foraging use for Northern harriers, Kites and other raptors, this loss of foraging habitat would occur with any development of the area. It would occur if it was a school, a church or any other type of development. The development is not going to result in loss of important flora. The Bayfront Conservancy Trust has always supported saving the most sensitive habitat, the wetlands, while allowing development of the nonsensitive upland areas.

W4 **Lagoon Makeup Water**

The report goes back and forth between the source of makeup water for the lagoons. For example: On p. 2-4, ¶ 3, sentence 3: "The ten acre lagoon would be salt water and would not connect with the San Diego Bay and would extend into the central portion of the area." Then p. 3-10, under Feasible Mitigation Measures, "Detailed Groundwater quantity and quality studies must be performed to verify the ability to pump the required amount of water to fill the ten acre public lagoon." Page 3-107, Marine Resources Impacts says that "the proposed project includes two direct drainages to San Diego Bay from the development area and would require a saltwater intake system to feed the internal lagoons."

W5

The EIR refers to the 10-acre lagoon as deep water habitat but does not provide any information on the depth nor the volume of water it will contain. The volume of water in both lagoons needs to be determined to adequately assess potential effects. The report states that the lagoon is proposed to be saltwater pumped as available groundwater. It also says that if groundwater is not available in the required amount or if it is contaminated, then a different source must be used. The water demands for the saltwater lagoon indicate a continuous average sustained yield of 50 gallons per minute and a maximum of 82 gallons per minute in the summer months.

W6

Intake from the San Diego Bay is a possible, feasible source. It would be preferable to use saltwater rather than freshwater. It appears that it may be better to withdraw seawater from the Bay rather than pumping groundwater, particularly if the groundwater is not saline, it is contaminated or large-scale withdrawals will negatively affect the aquifer. The aquifer study performed by Geo-Con indicates that within 500 to 100 feet of San Diego Bay there is a water supply of 10 to 20 gallons per minute. Eight wells would be needed to meet the demands of the proposed lagoon. The pumping costs for 8 wells delivering 20 gallons per minute are probably much greater than the pumping costs of water withdrawal from the San Diego Bay.

W7

While Geo-Con consultants did not perform contaminant analyses on their test well, there is available information indicating that trichloroethene (TCE) concentrations and petroleum hydrocarbons were present at elevated levels in wells drilled at Rohr Industries. It is possible that these same pollutants are present in the aquifer proposed for source water for the lagoons.

W8

There is a significant question regarding the availability, quantity and quality of groundwater for the lagoons. There is a potential for the groundwater to be contaminated and unsuitable for the lagoons. The potential for negative effects from saltwater intrusion and other disruptions of the groundwater lens and aquifer has not be determined. More extensive and thorough studies of groundwater quality are needed to assess availability, quality and quantity of makeup water for the lagoons. An estimation of evaporative losses from the lagoon should be included in the amount of water needed to keep them full. An

W3

Refer to General Comment 3.3.4.1. The DEIR includes a no-development alternative. While the development will not result in the loss of "important" flora on the basis of sensitive plant species, the flora of the uplands provide the framework upon which the raptor foraging habitat of the uplands is based. From this perspective, the flora of the uplands is very important.

W4

The proposed lagoon would be saltwater. No saltwater intake from the San Diego Bay is proposed. See General Responses 3.2.2.1 and 3.2.2.3.

W5

Depth and volume of 10-acre lagoon: Refer to General Response 3.2.2.1. Source of makeup water for lagoons: Refer to General Response 3.2.2.3.

W6

Source for lagoons: Refer to General Response 3.2.2.3. Feasibility of groundwater as source: Refer to General Response 3.2.3.1.

W7

Groundwater contaminants: Refer to General Responses 3.2.3.1 (Water Quality and Water Treatment and Monitoring), and 3.2.3.5 through 3.2.3.6.

W8

Availability, quantity, and quality of groundwater: Refer to General Responses 3.2.3.1, 3.2.3.6 through 3.2.3.8. Salt water intrusion: Refer to General Response 3.2.3.4. More studies needed of groundwater quality: Subsequent GEC studies generally support the feasibility of using groundwater as replacement water for the lagoons. Refer to General Responses 3.2.3.1, 3.2.3.6 (Potential for Contamination at Midbayfront), and 3.2.3.7 through 3.2.3.10. Evaporative losses from lagoons: Evaporative losses have been estimated in the Design Development Report (J. Harlan Glenn, July 25, 1990) at 4 feet per year, or approximately 46.2 acre-feet per year for the two lagoons. Offshore intake to provide replacement water for lagoons: Comment acknowledged. Refer to General Response 3.2.2.3.

In ecology and water quality, there are significant unmitigable impacts and the reason that those are not mitigable is because no adequate mitigation has been suggested. There is not enough information at a project level to determine how those identified impacts would be mitigated. It is important to separate the two different levels of detail when looking at the EIR and LCP.

It is important to note that the City of Chula Vista is the lead agency for preparation of the EIR, which means that they will be issuing the permits for the project. Approval of the proposed Midbayfront Development Project is a separate action from the certification of the EIR. It is possible that the Chula Vista City Council could approve the project even though the EIR identifies significant, unmitigable impacts, by issuing a finding and a statement of overriding considerations. After the EIR is approved by the Council, the City becomes the applicant requesting certification of the Local Coastal Program Resubmittal No. 8 before the California Coastal Commission.

There are significant adverse impacts which are the same for all of the proposed alternatives of the project. While it is possible to approve an EIR which has significant adverse impacts, it is essential that all of those impacts be identified so that a subsequent court challenge would not be able to revoke the permits because impacts were not considered in the EIR.

REVIEW OF THE EIR

This review includes specific issues that could be potentially affected by the project, which include:

- (1) Drainage and groundwater
- (2) Land form alteration
- (3) Biology
- (4) Water quality
- (5) Environmental summary

Under biological resources, the EIR identifies five adverse impacts that the EIR considers to be significant and unmitigable:

- (1) Alteration of predator/prey relationships
- (2) Avian predator enhancement
- (3) Loss of raptor foraging habitat
- (4) Clapper Rail impacts
- (5) Impacts on Belding's Savannah Sparrow

There are two issues that are raised repeatedly in the EIR. The first is an adverse impact that the EIR considers to be significant and unmitigable (#3), the loss of raptor foraging habitat. The second issue is the composition of makeup water for the jagoons. These two issues are treated below rather than repetitively as they arise in the EIR.

W1 Loss of Raptor Foraging Habitat

It is important to note that the loss of raptor foraging habitat would occur under any proposed alternative for that area. The Midbayfront is scheduled to be developed so those changes are going to occur regardless. There are significant upland areas on Gunpowder Point and in the surrounding marsh to support healthy prey and raptor populations.

W2

The Midbayfront is an area that has been greatly disturbed and native plant communities have already been removed. Since that area is being developed basically in exchange of the sensitive wetlands for a 404 drainage permit to develop the nonsensitive midbayfront, it is somewhat unfair to deem this as significant environmental impact, vis

Comment W - Bayfront Conservancy Trust. Review of the Draft City of Chula Vista Midbayfront LCP Resubmittal No. 8 Amendment Environmental Impact Report and Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan. Prepared June 28, 1990

W1 Refer to General Comments 3.3.3.3, 3.3.4.1 and 3.3.4.2. Though there may be upland areas left on Gunpowder Point, those areas are regarded as insufficient to sustain the abundance and diversity of raptors now present at the Midbayfront. As such, leaving only the upland areas on Gunpowder Point intact while removing the rest of the upland habitat at the Midbayfront through development would still result in significant, unmitigable impacts to raptor foraging habitat.

W2 The disturbed nature of the Midbayfront uplands is acknowledged on pp. 3-61 and 3-66 of Volume II. We recognize that valuable wetland habitat was donated. Refer to General Comment 3.3.4.1. The contribution of areas which constitute foraging habitat does not reduce the significance of the upland habitat slated for removal through development. The loss of habitat is absolute. Furthermore, the wetlands are of different ecological importance than are the uplands, and the wetlands do not provide the same wildlife values. Habitat evaluations are based on the resources present.

PREFACE

At their July 21, 1990 meeting, the Board of Directors of the Bayfront Conservancy Trust (BCT) directed the Executive Director of the Bayfront Conservancy Trust, to review the Environmental Impact Report (EIR) for the Midbayfront Development. Dr. Stephen Neudecker was instructed to only consider potentially significant effects resulting from the approval of the EIR on the operation of the Chula Vista Nature Interpretive Center (NIC) and on the surrounding wetlands. The Board directed Dr. Neudecker to not consider any other aspects of the EIR, such as visual aesthetics, conversion of agricultural lands, air quality, etc., that were not pertinent to the natural resources or operation of the NIC.

The Bayfront Conservancy Trust supports the development of the midbayfront because one of our central goals is to balance the needs of conservation and development, using the revenues generated by the development for education of the public on the importance of conservation of critical natural resources and the operation of NIC.

The development of the midbayfront is essential to the BCT and the operation of the NIC, because its beneficial tax assessment District will generate tax revenues needed for our operation and maintenance (\$500,000 a year with annual adjustments for inflation). Consequently the development of the midbayfront area is of critical importance to the BCT and we support that development. On the other hand, we need to insure that the development of the midbayfront will result in an environmentally sensitive project that will not exert significant negative effects on the surrounding wetlands, which we are trying so hard to restore, enhance and preserve.

In addition to the EIR for the proposed midbayfront Development, this review includes an analysis of the draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan, prepared June 28, 1990.

INTRODUCTION

The EIR addresses the proposed resubmittal of the City of Chula Vista Certified Local Coastal Program (LCP). The purpose of the EIR is to define the environmental consequences of the approval and adoption of the proposed resubmittal. The agency responsible for certifying the Local Coastal Program Resubmittal, is the California Coastal Commission. If the City approves the local coastal program resubmittal, then it would request its certification by the Coastal Commission.

In general, EIR's are at a plan level and they are general in nature because no specific development is proposed at that time. However, in this case Chula Vista Investors has submitted to the City a development plan for a portion of the project area. This EIR evaluates the proposed development plan and the project. The development plan does not however, contain enough information to prepare a project specific EIR and the information provided is analyzed only to the extent available.

The overall document that covers the general form and substance of the development is the plan level. The more intensive document that has specific issues that would tell us how potential significant impacts are dealt with, is the project level. There is insufficient information at the project level and a lot of data at the plan level. However, to adequately define the potential significant impacts at the plan level, we need the specific detail of the project level.

Comment W

REVIEW OF THE

**DRAFT CITY OF CHULA VISTA MIDBAYFRONT LCP RESUBMITAL
NO. 8 AMMENDMENT ENVIRONMENTAL IMPACT REPORT**

and

**DRAFT CITY OF CHULA VISTA LOCAL COASTAL PROGRAM
RESUBMITAL SPECIFIC PLAN, PREPARED JUNE 28, 1990**

Prepared by
Dr. Stephen Neudecker
Executive Director, Bayfront Conservancy Trust

Prepared for
Board of Directors
Bayfront Conservancy Trust

August 31, 1990

Douglas Reid
September 25, 1990
Page Two

Development Plan tall buildings encroach as close as 100 feet from the marsh. These could provide sites for raptors that would prey on the endangered species the refuge was established to protect.

V3 Generally, the Club is concerned that a project of the magnitude described will be incompatible with the maintenance of the refuge for the purposes for which it was established. Of particular concern is the problem of building height as it relates to raptors and the problems relating to the maintenance of the correct hydrological regime for the marsh, since there will be considerable drainage from the impervious surfaces created in the project.

V4 The Club therefore urges that the City not approve the LCP amendments as proposed and that the City maintain the existing LCP with any required minor modifications that would not involve increasing building heights.

V5 If the presently proposed project is approved, with the significantly increased density of development, including multiple hotels, it would appear necessary for the developer to seek modification of the Section 404 permits previously issued by the Corps. Any approval by the City of the enlarged project must contain conditions of approval that would require resubmittal to the Corps of a drainage design for the facility that would preserve intact a hydrological regime in the marsh that would enhance preservation of the light-footed clapper rail. It is doubtful whether the drainage design approved by the Corps in the presently issued section 404 permit would be adequate for a project of this substantially increased size.

Sincerely,

Lauren H. Silver
Lauren H. Silver

cc. Fish and Wildlife Service, Laguna Niguel office;
attention Martin Kenney

LHS:ld

V3 See General Response 3.3.3 - 3.3.3.4 relative to raptor utilization of buildings as perch sites. Relative to hydrologic concerns, see General Responses 3.2.1 - 3.2.1.2.

V4 This comment is noted, and is not relevant to the EIR's adequacy.

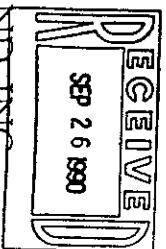
V5 Comment noted. See also General Response 3.3.6.3. Any re-analysis of the Section 404 permit would be at the discretion of the U.S. Army Corps of Engineers.

Comment V



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Ms. Robin Putnam
September 26, 1990
Page Five

Representatives from Rohr and Starboard would welcome the opportunity of meeting with you to discuss and clarify further these and other issues raised by the E.I.R. as they may impact the Rohr campus and new office complex.

Sincerely,


Ian M. Gill
Vice President

IMG:lrc

cc: Art Sellgren - Rohr Industries, Inc.
Amy Sadler - Starboard Development Corporation
Pam Buchan - City of Chula Vista

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Page Four

- U23** 23. Figure 3-XV; "G" and "H" street shown as public streets through Rohr property. Please correct figure by deleting.
- U24** 24. Figure 3-XVI; same comments as above.
- U25** 25. Figure 3-XVII; delete extension of "H" street as public street through Rohr property by year 2000. This extension of "H" street west to Marina Parkway encroaches on Rohr property; currently restricted to pedestrian use as part of Rohr campus.
- U26** 26. Figure 3-XVIII to 3-XXI; same corrections as above for these figures.
- U27** 27. P.3-186 - 3.194; Line 4 - P.3-186; the statement that "all existing and future Rohr development trip generation would be restricted to the p.m. off-peak (before 4 p.m. and after 6 p.m.) may not be in the City or Rohrs' best interest in terms of providing maximum flexibility to enable long term planning for highest and best use of the property - suggest thoughtful amendment or deletion of parts of this section. Could we discuss further the implications of this section before finalizing please?
- Rohr would also welcome the opportunity of discussing further the opportunities offered by development of a Transportation Demand Management Plan (P.3-190).
- U28** 28. P.4-9; 2nd last line on page - "The Rohr buildings are 3 stories." This statement should be deleted or modified to reflect the possibility of 8 - 12 stories per the Mid-Bay Front Plan or 3 to 6 stories as per likely plan.
- U30** 29. Figure 4-VIII - Rohr site plan inaccurate. Future building would most probably be located centrally to the east of 44' high building not as an appendage to the south.
- U31** The building referred to as the Rohr manufacturing building would be higher than 16', as would the Rohr Credit Union building most probably.
30. Figure 4-IX; same comments as above.
- U32** The above listed suggested amendments/corrections relate to areas of concern to Rohr and cover only the major issues, from Rohr's perspective, contained in the latest screen check draft E.I.R.

U23 Comment noted. Figure 3-XV was revised to reflect the existing conditions in the bayfront area for both "G" Street and "H" Street.

U24 Comment noted. Figure 3-XVI was revised to reflect the existing conditions in the bayfront area for both "G" Street and "H" Street.

U25 Figure 3-XVII represents the bayfront build-out condition for the proposed Midbayfront development project. The ten year planning horizon time frame for this area is Year 2000. This time frame corresponds with the planned period for build-out of the Midbayfront project. Thus, this figure represents the build-out condition in the bayfront area. "H" Street was extended from Bay Boulevard to Marina Parkway to provide the network connection that is included in the adopted City of Chula Vista General Plan Circulation Element.

U26 See Response U25 for Figures 3-XVIII and 3-XVI.

U27 As stated on pg. 3-186 of the August 1, 1990 DEIR, the forecasted levels-of-service at the "E" Street I-5 interchange would exceed level-of-service "D" under the standard traffic distribution and assignment assumption -- which loaded Rohr Development trip generation into the standard pm peak hour (between 4 p.m. and 6 p.m.). If the new Rohr Development trip traffic generation is not restricted to the pm off-peak (before 4 p.m. and after 6 p.m.), these unacceptable levels-of-service would exist in the future under the proposed LCP Resubmittal. The EIR analysis assumes that absent an agreement with Rohr, their future traffic generation may have typical peak hour characteristics.

U28 It is recommended that specific Transportation Demand Management strategies be implemented during the project specific review process for implementing each phase of development of the Midbayfront project. This recommendation is consistent with the strategies outlined in the Regional Transportation Demand program ordinance produced by the San Diego Association of Governments (SANDAG).

U29 This sentence describes building heights in Conceptual Alternative 7 and is not intended to reflect a site plan proposed by Rohr.

U30 Because no Rohr plans were available at the time the Draft EIR was completed, or are available now, this conceptual alternative devised an appendage in order to indicate that future square footage may be included. The exact lay-out is not important at this plan-level, conceptual stage.

U31 These are the heights as shown by the proposed Chula Vista Investors Midbayfront Development Plan which is the information being evaluated in this EIR, along with information in the LCP Resubmittal document.

U32 See Response U31.

- U14 14.** P.3-112; Requirements; I believe the Rohr Projects' proposed drainage system meets all the criteria stipulated in this section? We have tried in designing the project to exceed all requirements stated here for both Architectural and Engineering aspects of the project.
- U15 15.** P.3-131; General Plan (Update) - 2010 section; it is assumed that under the Industrial Research and Limited Manufacturing category, a higher use such as office could be built.
- U16 16.** P.3-144; Compatibility between Internal Land Uses; Line 4; "Building heights along the perimeter of the site (within 200 feet) should be no greater than 30'. This statement should be removed from the document as it is inconsistent with the current LCP's 44' height limit and plans for the Rohr project.
- U17 17.** P.3-152; Existing Conditions; Line 7; not aware of this existing 10 acre park; is this statement in error?
- U18 18.** Figures 3-X to 3-XIV - correct layout to indicate current Rohr plan.
- U19 19.** P.3-170; Water; Line 13; reference to an easement for a pipeline being maintained on Rohr's property. Is this an easement that currently exists? Check accuracy of statement.
- U20 20.** P.3-174; Water; assume that if Rohr project proceeds ahead of Barkett only public improvements directly applicable to Rohr project will be required at that time. Is this an easement that currently exists? Check accuracy of statement.
- U21 21.** P.3-174; Schools; Robin, payment of school fees should be adequate mitigation for a commercial project. Significant differences on this issue between Barkett (predominantly residential project) and Rohr (all commercial). Rohr is moving employees from existing campus to new building so there is no nexus between building and need for additional school places. Rohr is therefore vehemently opposed to participation in any Mello - Roos CRD.
- U22 22.** P.3-176; the Rohr Project will meet all the code and fire marshall requirements for service by existing equipment. Rohr should be exempted from the requirement to pay any share of the ladder truck and personnel.

U14 Refer to General Response above.

U15 Typically, office uses in this category are a part of other uses which would be related to research and limited manufacturing. Thus, office uses are allowed, and, depending on land use compatibility, could be the primary use.

U16 The text has been modified to reflect the existing LCP requirements.

U17 This line refers to the 3.0 acre Chula Vista Nature Interpretive Center, and the next line refers to the 1.0 acre passive park adjoining the corner of "F" Street and Bay Boulevard. There is no reference to a 10-acre park.

U18 Notations have been included on these figures as described in Response U4.

U19 Check LCPR No. 8. This statement is stated as such in the proposed LCPR No. 8. As the EIR paragraph further explains, the proposed infrastructure must be reviewed by both the City and Sweetwater Authority; this review would include verification of the existence of all easements.

U20 The requirements for the Rohr proposal (Phase I) are detailed in the EIR for that project.

U21 The certified Rohr EIR addresses school impacts and mitigation.

U22 The certified Rohr EIR addresses fire impacts and mitigation.

- U5 5.** Figure 2-V - comments per figure 2-IV above; SDG&E row shown for P-R and P-Q leased by Rohr for private parking.
- U6 6.** P 2.5 top of the page - wetland buffer and primary zone, 100 ft. buffer should be qualified to exempt south and east sides of the "F" - "G" Street marsh, or where existing buildings are currently located within the proposed buffer.
- U7 7.** Figures 2-VII - 2-X - need revision to reflect current/Jerde Partnership on this item - same comment for all figures including 3-IX, X, XI-XIX.
- U8 8.** Table 2-1; the statement of square footage included for Rohr in the Professional/Administrative (C-P) column should read 640,000 S.F. (including 500,000 S.F. of offices for Rohr); this clarification should occur for the developer proposal and alternative 3, 4, 5 proposals in this table.
- U9 9.** P.2-9 and 10 Section 2.4 Project Phasing; Rohr's inclusion in the phasing should be adjusted to reflect that their project named the "Rohr Office Complex" will be a 2 phase, 2 building project totalling 360,000 S.F. of office space plus associated parking. It is anticipated that both phases will be built-out within the time frame allocated for Phase 1 in the table i.e. (1991 - 1998) Phase 1 building = 245,000 S.F. plus parking; Phase 2 building 115,000 S.F. plus associated parking. Phase 1 building will be three story; Phase 2 building most likely six story.
- U10 10.** P.3-33; Line 3 - the heights of the buildings referred to in parents should be (44' and 113'). Robin, 113'; for the second building is conservative since it will probably only be six story but suggest you leave the height as is currently stated.
- U11 11.** P.3-62; final sentence; additional air quality analysis once design completed should be unnecessary as UBC dictates when forced ventilation is required based on design criteria.
- U12 12.** P.3-77; Birds section; assume this will be updated to reflect information garnered from species survey and avian flight path study.
- U13 13.** P.3-93; Wildlife Resources Impacts; Please qualify the last sentence of the first paragraph relative to the 100' buffer to except the east and south boundaries of the "F" - "G" Street marsh.
- U5** This comment regarding leasing is noted. The figure has been noted to refer the reader to the Rohr project as illustrated in this response.
- U6** The Rohr Building 61 is obviously exempted as it is located within the Primary Zone. However, no other buildings currently exist within this distance to the east of the Marsh.
- U7** Figure 2-VII is a conceptual drawing devised to illustrate the square footage and building heights as allowed by the existing adopted LCP. This, and all the other figures in Section 2 referenced in the comment, are all alternative scenarios developed in response to requests to evaluate other designs on the site and were completed before the Rohr project was proposed. These figures do not need to change as they are conceptual alternatives used for comparison with the Midbayfront project. The other figures referenced in Section 3 will all be noted with the same note that the Rohr parcel has been proposed for a different design and the reader will be referred to the figure shown in this response.
- U8** Table 2-1 already states what is suggested, with the exception of the words "of offices." However, since this square footage is under the Professional/Administrative category, offices are included in this category.
- U9** The Project Phasing Plan has been revised since the Draft EIR was completed. These changes are reflected on the new Phasing Plan, included in this DEIR, which replaces the Phasing Plan shown on the August 1990 Draft EIR. Rohr's changes are incorporated via a note at the end of the Phasing Plan.
- U10** The text has been changed. The Rohr project Draft EIR states that this building would be 42 feet.
- U11** The UBC requires that the exposure of any parking structure workers not exceed the OSHA CO exposure requirement of 50 ppm for an 8-hour average. The UBC requirement does not take into account any short-term public exposure outside the structure. Given the sensitivity of planned nearby residential development to air pollution, we continue to recommend a supplementary environmental evaluation for any parking structures once design parameters have been determined.
- U12** Comment noted. See Volume II pp. 3-85 to 3-88.
- U13** Comment noted. The southern boundary is to be exempted from the 100-foot buffer setback due to marsh fills which will be removed. The status of these areas are clarified in the text of the DEIR.

- X29** Page 3-87 under Drainage Basin, shows that the development will have an internal drainage to the lagoons of 11.0 developed acres. If this drainage does not contain oil and grease traps and nutrient traps, the nitrogen and phosphorus loading in this lagoon is going to result in a high propensity for algal blooms and it will become anoxic and dystrophic. A related concern is nitrogen and phosphorus loading from bird fees.
- X30** Pages 3-87 and 3-88, "The increased freshwater input..." It mentions input of freshwater originating from irrigation runoff, automobile washing, street and sidewalk cleaning. These types of freshwater inputs invariably will carry pollutants and nutrients with them. These types of inputs will make the water quality management of the lagoon, the surrounding wetlands and the San Diego Bay, more difficult. Some ways to mitigate the effects of fertilizers, pesticides, herbicides and other chemicals would be: (1) Through public education, (2) The development's CCR's can specify which chemicals can be and can not be used and (3) the sediment traps could include nutrient stripping capabilities.
- X31** Page 3-93 , ¶15, sentence 3, "For all other practical purposes, the remainder of the inner bayfront regions *would exceed 25 feet* in height with street parking lot lighting, low buildings, landscape etc." The word "not" has been left out there and they mean *would not exceed 25 feet*.
- X32** Page 3-96, it is evident that waterfront use will increase with the development. To keep people from making beach landings on the Sweetwater Marsh National Wildlife Refuge, it may be necessary to post a buoy line offshore with no trespass signs. It is clear that the potential impacts of increased human and pet presence are significant and adverse. The best mitigation would be what has always been proposed within the bayfront design, for the buffer zones to have physical, impenetrable barriers including both water and fence features. This would keep most feral cats, dogs and humans out of the wetlands. If the project includes a dam to contain the lagoon and separate it from the Bay and the dam has pedestrian access, a barrier must prevent people from accessing the beach and Refuge.
- X33** Page 3-100, ¶13, says "The results of this analysis indicated that the perceived threats might be expected within the buffer zones of the wildlife refuge, but these threats would not be expected to extend into the sensitive wetland areas." Then the next paragraph says the impacts of the project on the existing balance of competitors, predators and prey are considered to be significant. If they do not extend into sensitive wetland areas, how can they be significant? They can only be significant if there are endangered species within the buffer zones.
- X34** Page 3-100, ¶15, "it is probable that the predominate impacts will be restricted to the shoreward 100 to 150 feet of the marshlands." "These impacts could be substantially offset by the creation of similar habitat located farther from the development's site, but still integrated within the larger marsh complex." Where is there available land to create 13 acres of marsh besides on the National Wildlife Refuge?
- X35** Page 3-101, "The project would result in the elimination of approximately 135 acres of disturbed lands and fallow agricultural fields. This area would be replaced by approximately 10 acres of deepwater salt pond habitat." What constitutes "deep water"?
- X36** Page 3-101, ¶14, "The inclusion of sheltered pond environments expected to promote the presence of waterfowl, particularly mallards and coots." While this is true, feeding of waterfowl by the public through breadcrumbs and other unnatural foods, will result in large populations of birds and tremendous nutrient loading of phosphorous and nitrogen compounds to the lagoon and lead to water quality management problems. Such feeding is

harmful to the wildlife. Feeding of wildlife should be prohibited in all parts of the development.

- X37 The EIR concludes that shading of the wetland area from the tall buildings would not significantly affect the primary productivity of the marsh. This conclusion is warranted. Shading effects will also be nonsignificant for both macroinvertebrates and terrestrial insects. It is highly unlikely that there could be any significant effects on invertebrates because they are mobile. Shading will not effect them because they have the option to move to areas that are unshaded. Prohibiting the flying of kites should be incorporated into the development's CCRs.

Threatened and Endangered Species

Saltmarsh bird's beak

The populations of this plant are sufficiently removed from the development to not be affected by it.

California Brown pelican

It is expected that pelicans would roost or loaf on the proposed dam for the 10-acre lagoon. There is concern about the smell and the appearance of fecal material from pelicans. Another significant potential impact would be if the feces are washed into the lagoon and become a source of nutrient loading. Railings and fences around the perimeter of the marsh and around all water features should be designed to prevent bird roosting or loafing.

California Least tern

There is some special concern about the California Least tern because it breeds on the "D" Street Fill, and it needs foraging areas fairly close to the nesting colony. The project is expected to alter the predator regime in the local area, by increasing the concentrations of scavengers, including gulls, ravens, raccoons and opossums. And, increasing the number of avian predator roosts. These environmental changes are considered significant and are mitigable.

Lightfooted Clapper rail

All ground-nesting birds including Clapper rails, Least terns and Belding's savannah sparrows are particularly susceptible to predation by cats, dogs, skunks and raccoons.

X41

An important and potentially significant impact will be on Clapper Rails from the proposed wetland enhancement on the F & G Marsh, which could lead to roadkills of Clapper Rails crossing Marina Parkway. Any crossings should be via recilinear concrete box culverts. The significant impacts are increased predation, principally from feral cats and dogs brought by the development. Also, disturbance from humans and pets could have a significant effect on rails. These impacts are considered significant and mitigable, with exception of the predator threats associated with building mass and placement, which are considered significant and unmitigable under the proposed project. Those effects can be mitigated through the elimination of predator roosts near the wetlands.

Peregrine falcon

It is interesting to note that the treatment of Peregrine falcons says that the proposed development would provide additional perching and roosting sites, which would benefit the falcon. However, due to conflicting issues related to the presence of other endangered birds which may fall prey to falcons, the promotion of this species is not considered to be a benefit to the overall ecology of the area. And, more specifically, to the other endangered

- X37 Refer to W37.
X38 Refer to W38.
X39 Refer to W39.
X40 Refer to W40.
X41 Refer to W41.
X42 Refer to W42.
X43 Refer to W43.

birds which are more restricted in their habitat requirements than is the Peregrine." This is a very difficult issue of trying to balance the competitive needs of rare and endangered species and it should be noted that if the public is given a choice to choose between Least Terns, Clapper rails and Peregrine falcons, the public will time and time again choose the beautiful, powerful Peregrine, over the other two species. The report is making a value judgment saying that the falcon is not as important as Clapper rails or Least Terns. The management of endangered species is the responsibility of the USF&WS.

Belding's savannah sparrow

It notes that the birds are susceptible to human and pet impacts and also susceptible to predation at or near the nest by mammals and reptiles. It says that the proposed project is expected to have significant impacts on the enhancement of predator activities and increased harassment and predation by humans and pets, especially cats and the modification of habitat use areas. The report concludes that these impacts can be substantially reduced by the implementation of a predator management program and the creation of new habitat to compensate for loss of value due to the encroachment of predators.

"The remaining impacts would be considered to be significant and unmitigable." This is not necessarily so, there is plenty of upland habitat for Belding's savannah sparrows on Gunpowder Point. Additional habitat could be created or enhanced, with the concurrence of the USF&WS, and there would be plenty of areas to support a healthy population of Belding's savannah sparrow. The report concludes that these could be compensated for elsewhere on the Refuge.

Impacts to Eel Grass

Some storm drain outlets are designed to empty at the top of the existing mudflat and run over the surface of the flat at low tide. It would result in fewer environmental effects if this drainage was discharged subtidally. Subtidal discharge would also reduce the amount of freshwater flow and salinity alteration.

Significant mitigable impacts to Eel Grass beds would be expected to occur resulting from the placement of the drainage pipes. Sedimentation can be dealt with by upstream sediment traps and pollutants by oil traps and possibly nutrient traps. Another way to do this would be to discharge in a subtidal area.

Impacts to Mudflats

The report deals only with effects of a seawater system as related to construction. Significant potential impacts of the system could be related to its operation, in terms of the amount of water that is withdrawn and returned to the Bay, what chemicals are added into the lagoon while it is operational and what is done at the withdrawal (intake) site to minimize fish entrainment and impingement. Entrainment and impingement of fishes can be minimized by using a Johnson Wedgewire Screen on the intake. The location of the discharge is important to the operation of NIC's seawater system and will need to be evaluated at the project level.

The report discusses alternative project impacts and says six separate project alternatives have been proposed. Each of these vary in some degree from the proposed project. It is true that any bayfront development will include certain features which will have similar adverse biological impacts.

Existing Approved LCP Alternative 2

The EIR concludes that this alternative would result in "similar impacts to those of the proposed project with the exception of creating significantly fewer impacts of predator

- X44 Refer to W44.
- X45 Refer to W45.
- X46 Refer to W46.
- X47 Refer to W47.

threats to marsh bird foraging and nesting activities, through reduced building mass." However, if birds are unable to perch or nest on any of the ledges or sides of the building, there would not be a reduction if the relative roof area is the same. Alternative 2 does not have the pond and would not have some of the positive benefits to migrant and resident birds.

Alternative 3 Reduced Density 1

Page 3-110, sentence 4, is nonsensical. It says "This would likely lead to reductions in the impacts of avian predator threats to marshland birds, however, this would not result in significant reductions in either avian or mammalian predator concerns." It just said that it would reduce the avian predator impacts and then it says it would not. This sentence does not make sense.

Mitigation measures to mitigate several significant impacts identified in the report:

- (1) Increased freshwater input
- (2) Contaminant discharge
- (3) Sediment accretion and erosion
- (4) Human pet presence
- (5) Alteration of predator competition prey regimes
- (6) Alteration of habitat use areas
- (7) Alteration of Eel grass
- (8) Alteration of mudflats
- (9) Construction impacts

X49 Under Contaminant Discharge #2, nutrient inputs into the Bay and water features of the project need to be controlled. A significant impact has been left out: Water withdrawal effects on groundwater and those associated with an offshore seawater system.

MITIGATION MEASURES

X50 Requirement 1 on page 3-112, says that "the proposed project should include low flow diversions from the freshwater detention basin into the direct-to-day delivery systems, such that unseasonable freshwater drainage is not allowed to pass through the F & G Street Marsh." Unseasonable freshwater drainage means wet weather flow and it would not be a low flow diversion. The time the marsh needs water is during dry, low flow periods, not during wet season storm drainage conditions. Under wet season storm drainage conditions, the marsh gets water through collateral sources. The wet weather flows are the ones that tend to carry the highest concentrations of sediments and pollutants.

X51 Nutrient trapping or stripping to remove the nitrogen and phosphorous compounds before they are introduced either into the lagoon or the Bay should be considered under requirement 2.

X52 Requirement 4 deals with long term silt removal. We do not know the design of the clean-out structure of the detention basin. This kind of a sediment trap is easy to clean out if it is a concrete box structure that you can use a backhoe or a bucket to clean. Conversely, if it is mud bottom, it is much more difficult and expensive to clean. This requirement says that "long term silt removal maintenance of the detention should not be conducted following the initial construction phases of the proposed project." This is illogical. Effective sediment traps catch sediments and fill up. If they work, they will have to be cleaned out periodically.

- X53** Requirement 5A is an excellent recommendation to use subtidal drainage at a depth of 10 feet below mean low/tide water. Number 5A is by far the preferred choice over #5B.
- X54** Requirement 6 outlines some groundwater studies to check for salinity and contaminant concentrations and then mentions a saltwater intake and outlet. One of the potentially significant impacts of seawater withdrawal from the Bay would be fish entrainment and impingement. Studies are definitely needed and the project proponent needs to make a decision between freshwater makeup and saltwater makeup for the lagoons.
- X55** The desilting basins during construction are a good requirement. The recommendation on the controlled use of fertilizers, pesticides and herbicides is a good one, as well as application by certified landscape contractors. The restriction on plant materials is a good one. It is a good requirement to have "no pets" areas for the development and parks. The closed garbage containers are also a necessity and highly recommended. Open garbage receptacles are strong attractors of birds and other scavengers.
- X56** Requirement 15, restriction of human access to the marshlands and the west side of the buffer zones is absolutely essential. The best way to accomplish this will be through physical barriers. A resident management plan is a good requirement.
- X57** Requirement 17 suggests "a full-time enforcement staff of two or more officers, funded by the revenues generated within the Bayfront, to conduct predator management program, insure compliance, issue citations, conduct routine checks to insure maintenance of other mitigation requirements. The officers should work closely with the US Fish & Wildlife Service on enforcement issues." This is a good idea, however, the suggestion that these officers be accountable to the multi-representative Bayfront Conservancy Trust is unacceptable. It is not in the self-interest of the BCT to have anything to do with enforcement within the marsh. Within the development, it is the responsibility of the City of Chula Vista Police and the California Department of Fish and Game and within the refuge, the US Fish & Wildlife Service. These officers should report to those agencies rather than to the Bayfront Conservancy Trust.
- X58** Annual funding will be needed for maintenance of trash control, drainage facilities, fencing, predator control and mitigation programs and should be explicitly provided for as an element of the LCP.
- X59** Requirement 19 specifies the creation of additional salt and brackish water marsh habitat within F & G Street Marsh and the area between the F & G Street Marsh and San Diego Bay, of not less than 3.5 acres of brackish marsh and 4 acres of saltmarsh. This would be an enhancement to the wetlands. On the National Wildlife Refuge it will have to be approved and coordinated by the US Fish & Wildlife Service. On City property, between F & G Street Marsh and the San Diego Bay, such permission would not be required.
- X60** If tidal flushing is enhanced by a crossover under crossing of Marina Parkway, "a large half-round corrugated culvert of a 10 foot or more radius is suggested." It would be better to use a rectilinear, concrete box culvert to facilitate Clapper rail crossing. It is important that the rails be able to see completely through the pipe. It has not been established that Clapper rails will cross through a corrugated culvert. If the conduit is dark and there is not a direct line of sight to the other side, it is known that rails will not cross.

- X61** Requirement 20 says "No further dredging, structural changes or proposed uses should be allowed to occur along the mudflat and marshland areas of the bayfront." This is a great idea, but these specific impacts will occur if a seawater system is installed.
- X62** Requirement 22 says "Buildings facing marshlands should not include extraneous ledges upon which raptors can perch or nest." This is a good idea and if this is in fact done, then the additional masses of the buildings will be irrelevant in terms of adding additional perches.
- X63** Roof peaks and crests exposed to the wetlands should be covered with an anti-perch material such as nixolite. The antiroosting material catchaw is much more effective and has received more approvals and endorsements than nixolite.
- X64** Park Uses. All border parks along the E Street Marsh, the Vener Pond area and the F & G Street Marsh, should be passive use. They should use native vegetation and should include physical barriers. Public interpretive programs should be promoted and the BayFront Conservancy Trust could be contracted to help provide and review the interpretive text and graphics.
- X65** The EIR #26, page 3-115, calls for new marshland, mudflat and salt pond habitats totaling not less than 13.2 acres, to be created on the more isolated western portions of Gumpower Point with marsh linkage to both the E Street Marsh and the Sweetwater Marsh, to aid in offsetting impacts associated with encroachment, predation and loss of habitat use by avian species. This is a major marsh creation project that would definitely need extensive approval and design consultation with the US Fish & Wildlife Service.
- X66** It is inappropriate for this report to be calling for a one-to-one ratio of habitat impacted and replaced. Whatever the ratio is should be the purview of the US Fish & Wildlife Service, not the environmental consultants preparing the EIR.
- X67** Under the analysis of significance, the 26 mitigation measures that are suggested, would mitigate most of the impacts of the project.
- X68** Successful prohibition of pets in the development and parks, prohibition of kites, restriction of access to the Refuge and shore, prohibition of feeding wildlife and restrictions on chemical uses will require an extensive and effective educational program to ensure compliance. The Bayfront Conservancy Trust could be contracted to provide these educational services. All of the users of the development need to understand the critical importance of the wetlands surrounding the project.
- ANALYSIS OF SIGNIFICANCE**
- X69** A primary concern of the effects of increased predator presence, specifically in the areas of wetlands fringing the Midbayfront is creating threats to nesting by Belding's savannah sparrows and Blackneck stilts. The most significant mitigation will be building design that does not allow for ledge perching on all of the faces facing the wetlands and antiroosting material. If those are done, the relative height of the buildings will not be so important. The potential for contaminant discharge is hard to evaluate at this time, more detailed studies and information are needed.

PARKS, RECREATION AND OPEN SPACE

Public Access 3-156
X70 "Though the site has not been approved to provide easy public access, the public can access the Bayfront from "F" Street and from utilizing the Nature Interpretive Center."

Then it says regarding public access "The proposed LCPR #8 text states that public access to the waterfront and natural areas should be maximized, in that key points of public access to the Bay and natural areas should be visible from a distance." The concern is public trespassing on the shore of the National Wildlife Refuge. The only place where there could be beach access is at the south end of the National Wildlife Refuge at the foot of "F" Street and the public should be totally excluded from walking along the beach. There really is limited opportunity for public access to the Bay.

X71 The parks on the north and west sides of the project front on the wetlands and the Bay and the northside park should definitely be passive type parks.

X72 The plan says that there will be 54 spaces for Nature Interpretive Center parking, this would be appropriate for the short-term, but these parking spaces must be built in Phase One of the development. Those 54 spaces are under the SDG&E right-of-way. The long-term parking requirements for NIC have been projected to be 150 permanent spaces. The LCPR #8 text provides a public parking for use by the Center located within the Midbayfront, including the small public parking lot (50 spaces) and bus shelter at the entrance to the Wildlife Refuge. The EIR does not identify the location of the remaining 46 spaces needed for NIC. We need bus shelters at both parking lots.

ALTERNATIVES

X73 Under the applicant's goals for the project area, #2- locate the project adjacent to San Diego Bay where there is an opportunity for the future development of a marina. It has been clearly stated by the US Fish & Wildlife Service that there is no opportunity for developing a marina fronting any portion of the Bay or Gunpowder Point, adjacent to the National Wildlife Refuge.

X74 We agree with the applicant's goal to restore degraded wetland habitat areas adjacent to the Sweetwater Marsh National Wildlife Refuge. Under #8, the project would provide Chula Vista with: add #F, a beneficial tax assessment district to fund the operation and management of the Chula Vista Nature Interpretive Center.

X75 Several of the proposed alternatives include public access to the water. This is unacceptable under any of the alternatives, because of the sensitivity of the Eel grass beds and access to the Sweetwater Marsh National Wildlife Refuge.

X76 Many species will habituate to this disturbance and others will move elsewhere. The biological analysis shows that shading is not an issue in terms of productivity or effects on animals. This conclusion is warranted.

X77 The special study on flight patterns indicates that they are not significantly affected. The birds tend to not fly over the Midbayfront, they fly over the wetlands and around its perimeters. The conclusion that flight patterns are not significantly affected is supported by the data.

X70 Refer to W70.
X71 Refer to W71.
X72 Refer to W72.
X73 Refer to W73.
X74 Refer to W74.
X75 Refer to W75.
X76 Refer to W76.
X77 Refer to W77.

- X78** The Bayfront Conservancy Trust does not want to have the animal control and enforcement officers working for us. The responsibility within Chula Vista should go to the Chula Vista Police Department and the California department of Fish and Game and within the Refuge, those officers should be responsible to the US Fish & Wildlife Service.
- Some of the most important environmental issues include:**
1. Control of nutrient inputs to the lagoons, wetlands and San Diego Bay;
 2. Restricting the feeding of birds and other wildlife;
 3. The source of lagoon water makeup;
 4. Access to the beach;
 5. Physical barriers in the buffers;
 6. Seawater intake and discharge;
 7. Predator perches; and
 8. Encroachment of humans and pets (cats & dogs)
- X78** Refer to W78.
X79 Refer to W79.
X80 Refer to W80.
X81 Refer to W81.
X82 Refer to W82.
X83 Refer to W83.
X84 Refer to W84.
X85 Refer to W85.
- #### EDITORIAL CONCERNS
- X79** Descriptions in the EIR of the native coastal sage plant communities state that certain species show *dominance* and these areas are *dominated* by such scrub elements as Flat-top buckwheat, etc. (eg. p.3-70, ¶s 4&5) Most ecologists and all ethnologists would not use the term *dominant* (*not dominated and dominating*) to indicate numerical abundance. Dominance connotes a behavioral superiority or inability to survive in the presence of, or compete with other species. To describe abundance, the preferred term is *predominant*, meaning abundance rather than a competitive or social advantage.
- X80** Page 3-71 ¶12. "Numerous tidal channels meander through the marshlands *both* increasing the complexity of the *dominating mid-marsh habitats*." What does that mean? Similarly, Page 3-71, last ¶, "Vener pond previously dominated by open water."
- X81** On p.3-70, ¶s 4&5 states that "sensitive *Suaeda esteroa*." It does not say sensitive to what. Is it sensitive to salt, is it sensitive to touch, is it sensitive to loud music? When the term sensitive is first used, it should be defined as a legal concept describing the relative population status of that species. It refers to a species of special concern or a potential candidate for listing as rare, endangered or threatened.
- X82** Page 3-83; the top of the page starts with "sensitive wildlife." Numerous sensitive animals occur or have the potential for occurring within the project boundaries. Once again, the word "sensitive" is not defined. What does it mean? Does it mean these are species that are potentially threatened? Are they species of special concern? Please define "sensitive", because it is used very confusingly throughout the report.
- X83** Throughout the EIR, the authors are confused about the difference between fish and fishes. Fish is used to describe one or a million individuals of one species. Whereas fishes is used to describe multispecies groups. So a mudsucker and a salmon are fishes.
- X84** Page 3-72 ¶12. "These habitats are extremely dynamic in the warm shallows of San Diego Bay." What does this mean?
- X85** Page 3-80, ¶12. "These coastal wetlands have suffered a tremendous decline in the recent past due to both direct and indirect impacts." Are they sinking into the ocean? What is happening? Is it a decline in species abundance; in species composition? Perhaps they are trying to say that the amount of coastal wetland area has been significantly reduced in the recent past.

X86 The report uses *raptorial* and *raptorial* interchangeably. Only *raptorial* is correct. Sometimes the report uses "unmitigable" and sometimes it uses un-mitigable with a hyphen. No hyphen is needed but either way, they must be consistent.

X86 Refer to W86.

**REVIEW OF THE
Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan,
Prepared June 28, 1990**

- Bayfront Goals**
X87 #E - Provide good regional access to the Bayfront. It is very important to discriminate between access to the Bayfront development and access to the Bay itself, through the development. The first is certainly desirable; the second is not. The public can not be allowed to walk along the shoreline of the Sweetwater Marsh National Wildlife Refuge.
- X88** II-5, #C - Discussion of Coastal Goals Policies, Specifically Access to the Shoreline. Public access is now through shuttle bus to the Nature Interpretive Center. It says that the lack of adequate public access is due in part to the lack of development along the shoreline. Once again, this is an important issue with the National Wildlife Refuge.
- X89** A beneficial feature of the LCP Amendment is under #3 Water and Marine Resources, "C" Planned Provisions Page II-7. "This land use plan provides for the restoration (creation) of at least seven acres of new wetland and the enhancement of at least 0.5 acres of degraded wetland." The LCP also calls for the restoration (creation) of at least two acres of new coastal sage scrub habitat. The plan says that except for the desalination basin, all of the restoration acreage will be located within the Wildlife Refuge. Obviously, any activities on the refuge will need the permission and assistance of the USF&WS. Much of the restoration is planned is within the Refuge (F & G Street Marsh).
- X90** Encouraging public recreational boating on the manmade lagoon is fine, but to encourage beach access and recreational boating off the National Wildlife Refuge is undesirable.
- X91** Environmentally Sensitive Habitat Area #6 on page II-11. It mentions buffer zones of 100 feet minimum, maximum of 600 feet, separating the marsh from the development. These buffers are essential.
- X92** Public access to the Wildlife Refuge is presently limited to the shuttle bus service to the Nature Interpretive Center. The CC&R's of the Midbayfront Project will prohibit dogs and cats and should also list acceptable fertilizers, pesticides and herbicides and prohibit kite flying. An effective educational program will be needed to ensure compliance with these important restrictions.
- X93** Page II-16, Section #11 Coastal Visual Resources and Special Communities, "...open up the shoreline for public access and allow the public to experience the views from the perimeter of the Bayfront, outward." Experiencing the views and walking along defined corridors is acceptable but access to the shoreline itself is not.
- X94** Land Use Policies Page II-29 #G. Access to the Nature Center will only be provided by shuttle bus. This is desirable.
- X95** Page II-39 #7 Land Use Design Policies. There must be a visually unobtrusive separation between the wetlands and the development and it must contain a physical, but not visual barrier.
- X96** Page II-39 Section 7 Land Use Design Policies. Numbers 1, 2, 3, 4, 5, 6, 7, 8, 13, 17 are concurrent with the goals of the BCT. No. 15 talks about public access to the waterfront and No. 17 talks about public access prohibited in

- sensitive natural areas. The entire shoreline, except for the F Street intersection to the Bay is sensitive and public access should be prohibited.
- X97** Section 7 Page II-54 Pedestrian and Bicycle Circulation Policies. Calls for public access to the parks and the shoreline from the northern portion of the Wildlife Refuge to the F & G Street Marsh end of the Refuge. This is the only area where pedestrians could be allowed shore access and there will need to be some kind of physical barrier to keep them from going north on the shore of the Refuge.
- X98** Environmental Management Objectives Section 3 Page II-94. All of the management objectives as well all of the Environmental Management Policies contained in Section #4 are concurrent with the goals of the BCT.
- X99** West Interface Area II-103 - 04. It says the interfaced area will have a shoreline walk, view points and public parks. Access to the beach must be restricted and all railings should be designed to prevent bird roosting.
- X100** The most significant problem for the Bayfront Conservancy Trust in the LCP Resubmittal, is that the environmental organization and administration sections which occur in the certified Chula Vista Bayfront Specific Plan, Chula Vista Local Coastal Program Phase 3, Amended 11/86 are completely absent from the LCP resubmittal. The currently certified LCP has the Environmental Organization and Administration Section 19.885--which established the organization and administration of the Bayfront Conservancy Trust, outlined its management goals and objectives, its administrative organization, its functions, its sources of revenue, management of the plan "Wildlife Habitat Restoration and Enhancement", maintenance and monitoring. None of this critically important documentation has been included in the Resubmittal. Much of the language use in the certified LCP can be adopted, but some adjustments will be required.
- X101** Section 19.88.56 - Revenue Sources of the certified LCP states that the Bayfront Conservancy Trust will be funded by a beneficial tax assessment district which would assess an annual tax based on the gross annual revenues of every business in the Bayfront development. That annual assessment will need to total \$400,000 per year to cover the operating expenses and maintenance of the Chula Vista Nature Interpretive Center and the Bayfront Conservancy Trust, with a clause adjusting the assessment for inflation. Almost all of the language that is needed is included in that section of the certified LCP. The Bayfront Conservancy Trust staff is available to help determine the exact language for inclusion in the LCP Resubmittal.

X97 Refer to W97.
 X98 Refer to W98.
 X99 Refer to W99.
 X100 Refer to W100.
 X101 Refer to W101.

Comment Y

R E C E I V E D

SEP 20 1990

Community Development Dept.

Comments of the
Board of Directors, Bayfront Conservancy Trust
on the

DRAFT CITY OF CHULA VISTA MIDBAYFRONT LCP RESUBMITAL,
NO. 8 AMENDMENT ENVIRONMENTAL IMPACT REPORT

and

DRAFT CITY OF CHULA VISTA LOCAL COASTAL PROGRAM
RESUBMITAL SPECIFIC PLAN

Submitted to the
Environmental Review Coordinator,
City of Chula Vista
P.O. Box 1087
Chula Vista, CA 92012

Submitted by
Dr. Stephen Neudecker
Executive Director, Bayfront Conservancy Trust

September 19, 1990

INTRODUCTION

At their September 11, 1990 meeting, the Board of Directors of the Bayfront Conservancy Trust (BCT) reviewed the *Environmental Impact Report (EIR) for the MidbayFront Development and the Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan*.

The Bayfront Conservancy Trust unanimously agreed to submit their comments on some issues of particular concern to the BCT Board of Directors because of their effects on the operation of the Chula Vista Nature Interpretive Center (NIC) and the surrounding wetland resources.

The BCT Board respectfully requests that these issues be mitigated and resolved before approving the EIR and requesting certification of the LCP. We are particularly concerned about the omission of the environmental management sections from the LCP which established the BCT and the Beneficial Tax Assessment District to fund the operation and maintenance of the NIC.

Submission of these comments by the BCT Board of Directors does not preclude each of the individual members nor their respective agencies from commenting on the EIR or the LCP. Additional comments and concerns are being submitted by the Executive Director of The Bayfront Conservancy Trust separately.

The issues of particular concern are:

1. Seawater intake and discharge effects and lagoon water makeup
2. Parking for the Nature Center
3. Predator control and enforcement
4. The organization of the Bayfront Conservancy Trust and its funding by the Beneficial Tax Assessment District

REVIEW OF THE EIR

Lagoon Makeup Water

There is a significant question regarding the availability, quantity and quality of groundwater for the lagoons. There is a potential for the groundwater to be contaminated and unsuitable for the lagoons. The potential for negative effects from saltwater intrusion and other disruptions of the groundwater lens and aquifer has not been determined. More extensive and thorough studies of groundwater quality are needed to assess availability, quality and quantity of makeup water for the lagoons. Estimations of evaporative losses from the lagoons should be included in the amount of water needed to keep them full. An offshore intake for saltwater to provide makeup water for the lagoons would avoid groundwater availability and quality problems.

Y1

Comment Y - Bayfront Conservancy Trust, Review of the Draft City of Chula Vista Midbayfront LCP Resubmittal No. 8 Amendment Environmental Impact Report and Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan

These comments are essentially the same as some of the comments found in Letter W. The Letter W comments which are the same are referred to below, as well as any additional appropriate responses.

Y1 Refer to Letter Comment W8.

- Y2** At this time not enough information is available to analyze this important issue as it relates to biological resources. Additional studies are needed. Pumping costs and the effects of large-scale groundwater withdrawals should be determined. At the project level it is clear that the proponent is going to have to make a decision between groundwater or baywater makeup for the lagoon and perform the needed analyses. Once the studies are done the associated impacts can be evaluated.
- Y3** Impacts to Eel Grass
Some storm drain outlets are designed to empty at the top of the existing mudflat and run over the surface of the flat at low tide. It would result in fewer environmental effects if this drainage was discharged subtidally. Subtidal discharge would also reduce the amount of freshwater flow and salinity alteration.
- Y4** Significant mitigable impacts to Eel grass beds would be expected to occur resulting from the placement of the drainage pipes. Sedimentation can be dealt with by upstream sediment traps and pollutants by oil traps and possibly nutrient traps. Another way to do this would be to discharge in a subtidal area.
- Y5** Impacts to Mudflats
The report deals only with effects of a seawater system as related to construction. Significant potential impacts of the system could be related to its operation, in terms of the amount of water that is withdrawn and returned to the Bay, what chemicals are added into the lagoon while it is operational and what is done at the withdrawal (intake) site to minimize fish entrainment and impingement. Entrainment and impingement of fishes can be minimized by using a Johnson Wedgewire Screen on the intake. The location of the discharge is important to the operation of NIC's seawater system and will need to be evaluated at the project level.
- Y6** Requirement 6 outlines some groundwater studies to check for salinity and contaminant concentrations and then mentions a saltwater intake and outlet. One of the potentially significant impacts of seawater withdrawal from the Bay would be fish entrainment and impingement. Studies are definitely needed and the project proponent needs to make a decision between freshwater makeup and saltwater makeup for the lagoons.
- Y7** Requirement 17 suggests "a full-time enforcement staff of two or more officers, funded by the revenues generated within the Bayfront, to conduct predator management program, insure compliance, issue citations, conduct routine checks to insure maintenance of other mitigation requirements. The officers should work closely with the US Fish & Wildlife Service on enforcement issues." This is a good idea, however, the suggestion that these officers be accountable to the multi-representative

Bayfront Conservancy Trust is unacceptable. It is not in the self-interest of the BCT to have anything to do with enforcement within the marsh. Within the development, it is the responsibility of the City of Chula Vista Police and the California Department of Fish and Game and within the refuge, the US Fish & Wildlife Service. These officers should report to those agencies rather than to the Bayfront Conservancy Trust.

PARKS, RECREATION AND OPEN SPACE

Y8 The plan says that there will be 54 spaces for Nature Interpretive Center parking, this would be appropriate for the short-term, but these parking spaces must be built in Phase One of the development. Those 54 spaces are under the SDG&E right-of-way. The long-term parking requirements for NIC have been projected to be 150 permanent spaces. The LCPR #8 text provides a public parking for use by the Center located within the Midbayfront, including the small public parking lot (50 spaces) and bus shelter at the entrance to the Wildlife Refuge. The EIR does not identify the location of the remaining 46 spaces needed for NIC. We need bus shelters at both parking lots.

Y9 Since the Chula Vista Nature Interpretive Center has already been in operation for more than three years and there is already a need for parking, the entire 150 permanent parking spaces needed for the Nature Center should be constructed in Phase 1 of the project.

Y8 Comment noted. See Response W72.

Y9 Comment noted. See Response W72.

**REVIEW OF THE
Draft City of Chula Vista Local Coastal Program Resubmittal Specific Plan,
Prepared June 28, 1990**

Y10 Please see Response W87.

- Y10** The most significant problem for the Bayfront Conservancy Trust in the LCP Resubmittal, is that the environmental organization and administration sections which occur in the certified Chula Vista Bayfront Specific Plan, Chula Vista Local Coastal Program Phase 3, Amended 11/96 are completely absent from the LCP resubmittal. The currently certified LCP has the Environmental Organization and Administration Section 19.885--which established the organization and administration of the Bayfront Conservancy Trust, outlined its management goals and objectives, its administrative organization, its functions, its sources of revenue, management of the plan "Wildlife Habitat Restoration and Enhancement", maintenance and monitoring. None of this critically important documentation has been included in the Resubmittal. Much of the language used in the certified LCP can be adopted, but some adjustments will be required.

Section 19.88.56 - Revenue Sources of the certified LCP, states that the Bayfront Conservancy Trust will be funded by a beneficial tax assessment district which would assess an annual tax based on the gross annual revenues of every business in the Bayfront development. That annual assessment will need to total \$500,000 per year to cover the operating expenses and maintenance of the Chula Vista Nature Interpretive Center and the Bayfront Conservancy Trust, with a clause adjusting the assessment for inflation. Almost all of the language that is needed is included in that section of the certified LCP. The Bayfront Conservancy Trust staff is available to help determine the exact language for inclusion in the LCP Resubmittal.

Comment Z

R E C I V E D

Sept 27 1990

Community Development Dept.

Comment Z - A. D. Hinshaw Associates

- Z1 The revision is included in the DEIR as Alternative 8. See Section 4.0, Alternatives.
Z2 These comments are noted.

Ms. Robin Putnam
Redevelopment Agency
City of Chula Vista
276 4th Avenue
Chula Vista, CA 92010

Re: COMMENTS CONCERNING THE MIDBAYFRONT LCP RESUBMITAL NO. 8
AMENDMENT EIR

Dear Ms. Putnam:

Chula Vista Investors (CVI) has reviewed the Draft EIR issued for public review and comment on August 3, 1990. A.D. Hinshaw Associates has compiled the comments prepared by various consultants and is submitting them on behalf of CVI. We have a number of concerns about the conclusions reached in the EIR which are detailed in the attachment to this letter.

Please note that a significant revision to the project is detailed in our comments regarding the Phasing Plan (Section 2-4 of the EIR). An accompanying plot plan (dated 9/26/90) is attached. This revision creates more park area, reduces the heights of several buildings and reduces the density and intensity of residential and hotel development. The attached comments indicate where these reductions would lessen, or mitigate, the impacts identified in the EIR.

The following overview comments pertain to the document as a whole and have a major bearing on one or more sections of the DEIR.

I. ADEQUACY OF DRAFT ENVIRONMENTAL IMPACT REPORT

Z1 The Draft Environmental Impact Report for LCPR No. 8 and the CVI Midbayfront Project is a comprehensive analysis of the potential impacts that might conceivably result from approval of the LCPR and subsequent implementation of the proposed project. We believe that the DEIR is legally adequate in terms of addressing issues and potential impacts.

The comments and information presented in this letter are intended to clarify the DEIR's analysis and discussion of selected issues and potential impacts, and to generally strengthen the document by supplying additional pertinent information, amplifying technical discussions, and correcting misstatements and misinterpretations where needed.

II. LCPR 8 AND CORPS PERMIT PROVISIONS NOT TAKEN INTO ACCOUNT

Several key sections of the DEIR's Impact Analysis do not take into account the environmentally protective policy and design provisions set forth in LCPR No. 8's Land Use Plan, even though these are directly pertinent to the analysis. The LCPR's "Specific Development Policies" and "Development Standards" contain explicit design provisions and requirements that were incorporated in the LCP in order to prevent and/or mitigate the various environmental impacts called out in the DEIR.

Z3 Of particular importance are the environmentally protective project design provisions that are committed to in the Environmental Management section of LCPR No. 8. The requirements of these provisions focus on: (a) preventing or mitigating various types of biological impacts; and (b) committing to a series of restoration and enhancement measures to upgrade the quality of wildlife habitat in currently degraded areas of the National Wildlife Refuge.

The impact analysis also does not take into account the various environmentally protective requirements specified in Special Conditions 1 through 13 incorporated in the Corps of Engineers Section 404 Permit #88-267-R18 for the CVI project.

III. CVI MIDBAYFRONT PROJECT ENVIRONMENTAL BENEFITS

The proposed CVI Midbayfront project incorporates a number of important environmental measures which will provide substantial benefits to wildlife habitat. These benefits include CVI's commitment to:

- Z4**
- (a) Donate a 3-acre parcel of fee land on the bayfront west of Marina Parkway;
 - (b) Convert this 3-acre parcel to low salt marsh connected to the F/G Street Marsh;
 - (c) Restore and enhance about six acres of degraded wetland in the F/G Street Salt Marsh;
 - (d) Fence and screen the F/G Street marsh with appropriate native vegetation;
 - (e) Restore additional acreage at Gunpowder Point and/or "D" Street Fill at locations to be agreed upon with USFWS, other resource agencies, and the City of Chula Vista;
 - (f) Establish a comprehensive Habitat Restoration and Management Program that will include:
 - (1) Predator Management Program;
 - (2) Mitigation Monitoring Program; and
 - (3) Maintenance Program;

- Z5** (g) Construction, operation and maintenance of a desilting basin to improve water quality and control water flow to new freshwater marsh at E/G Street; and (h) establishment of a 100-foot wide primary zone (locally considerably greater) adjoining the Refuge boundary in the E-Street Marsh/Venet Pond/Sweetwater Marsh area of the National Wildlife Refuge. This zone will incorporate maximum use of Coastal Sage Scrub vegetation as well as a vegetation-screened chain link fence to restrict human access to the Refuge.
- Z6** The details of the Habitat Restoration and Management Plan (HRMP) are being worked out with the biologists and resource management specialists of the USFWS with additional technical input from California Department of Fish & Game, and from various private sector consulting biologists.
- This HRMP to be entered into prior to Coastal Commission action, will constitute a contractual document between CVI and USFWS; this contract will ensure the orderly and efficient implementation of the various restoration and monitoring commitments made by CVI in connection with approval of the project. In addition, the HRMP could be incorporated in the Development Agreement to be executed between CVI and the City of Chula Vista, thus making the City a party to the contractual provisions.
- Z5** Comment noted.
- Z6** Comment noted. The Draft HRMP is in the process of being developed by the applicant and the USFWS. For the purposes of the DEIR, the applicant has submitted performance/design standards that the HRMP will be consistent with and expanded upon (CVI's proposed "Design Requirements"). In addition to the HRMP's incorporation into the development agreement between the City of Chula Vista and the applicant, the effectiveness of the HRMP will be evaluated at the project-level of CEQA compliance.
- Z7** See Response Z3. In addition, it is important to note that this EIR is a plan-level CEQA document. Consequently, impacts for which mitigation measures are not specifically identifiable remain significant until more detailed plans are developed for the project at the project-level of CEQA compliance.
- Z8** See Responses Z3 and Z7.
- IV. SEVERITY OF IMPACTS OVERSTATED**
- As a result of not taking into account the environmental protection and restoration measures committed to by CVI in LCPR No. 8, and the Corps Permit Special Conditions to which CVI has agreed, the DEIR analysis of potential physical and biological impacts over anticipates the severity of a number of the impacts identified. Potential impacts for which severity has been overstated include:
- Physical impacts associated with:
- Z7** (a) ground settlement;
(b) seismic hazards;
(c) grading;
(d) flooding;
(e) erosion;
(f) water quality; and
- Biological impacts associated with:
- Z8** (a) increased fresh water input;
(b) sediment accretion and erosion;
(c) contaminant discharges; and
(d) eelgrass beds and mudflats.

V. EXISTING CERTIFIED LCP IS IMPORTANT BACKGROUND INFORMATION

The DEIR addresses the Resubmittal of an existing Certified LCP. The principal elements of that LCP constitute important background information bearing directly on the Resubmittal. Accordingly, the introductory section of the DEIR should summarize the major elements of the Certified LCP and the major findings of the Final EIR certified by the City in connection with that LCP. Such a summary would provide a valuable basis for comparison by decision-makers (City Council) of the policy and design provisions of the proposed LCP Resubmittal (and the CVI project) with the provisions and project in the Certified LCP.

VI. PRECEDING LCP-RELATED EVENTS

The DEIR evaluation of LCPR No. 8 and the CVI Midbayfront project virtually ignores the series of major events that preceded preparations of LCPR No. 8. These events, which have an important bearing on the overall evaluation of the CVI project, include:

- (a) The Redevelopment Agency's more than ten years of planning efforts and negotiations toward redevelopment of Chula Vista Bayfront;
- (b) The two-year litigation re the Bayfront LCP and the resulting 1988 Settlement Agreement;
- (c) The donation of 315 acres of private property to the Federal government to allow creation of the Sweetwater Marsh National Wildlife Refuge so as to guarantee protection of virtually all wetland and related wildlife resources in the Bayfront area; and
- (d) The resulting entitlement for development of the remaining 135 acres of Midbayfront uplands.

VII. PROJECT IN CERTIFIED LCP SHOULD NOT SET THE STANDARD FOR COMPARISON WITH CVI PROJECT

The impact analysis presented in the DEIR (and explained in detail to the Planning Commission and the Redevelopment Agency at the September 6, 1990 Workshop on the DEIR) makes repeated use of the 1986 Certified LCP Project as a reference standard against which are compared the development density and building heights of CVI's proposed project (and possible alternatives). This use of the 1986 project as a standard for comparison is flawed for the following reasons:

- (1) The 1986 LCP project was substantially reduced in size and density as a result of the 1988 Settlement Agreement that transferred 315 acres of wetlands and the uplands at Gunpowder Point and the D-Street Fill to Federal ownership.

Z9 The text of the DEIR has been modified on pg. 2-12 of Volume II on add that "The existing, adopted LCP, General Plan, and Redevelopment Plan are all available for inspection at the City of Chula Vista Planning Department, 276 Fourth Avenue." More reference and restating is not necessary, and even burdensome when the DEIR is already a large document. The project being analyzed under this EIR is the proposed LCPR No. 8, which revises the entire text of the certified LCP, including many of its major elements and findings. Thus, the Project Description of this EIR focuses attention on the proposed project. Policy changes from the existing LCP to the proposed LCPR No. 8, as they relate to environmental impact, are discussed throughout the EIR in the appropriate sections. Further, Alternative 2 in the DEIR is a possible development scenario under the certified LCP. Thus, the potential environmental impacts of the certified LCP are also analyzed in the DEIR.

Z10 These events have no bearing on the environmental impacts discussed for the proposed project, thus, it is not necessary to include them.

Z11 As mentioned in Response Z29, the certified LCP was discussed where it was important to the analysis of environmental impact. The comparison which this comment refers to occurs on pp. 3-131 and 3-132 of Volume II, and uses the existing certified LCP as one of the measures of acceptable intensity (or density) for Midbayfront development. The existing certified LCP is used because, as it states in the DEIR: "The existing LCP went through exhaustive public agency review before its certification, resulting in a plan that attained most public and agency acceptance." The measure of intensity for the Midbayfront subarea was a maximum of 2.5 million square feet, and did not include square footage allowed on Gunpowder Point and D-Street fill. Since the LCPR No. 8 project proposes 4.2 million square feet in the Midbayfront subarea, it is appropriate to compare only the Midbayfront square footage, and not include development intensity allowed for other parts of the bayfront.

- Z12 (2) The project elements approved for the Gunpowder Point and D-Street Fill areas constituted the high density components of the 1986 LCP project, namely, a hotel of up to twelve stories on fourteen acres at Gunpowder Point, and two marinas and two, five-story, marina-related buildings on the D-Street Fill.
- Z13 (3) Because much of the project density was concentrated in the other two elements, the upland area (now termed the Midbayfront area) was planned and approved for only moderate density.
- Z14 (4) With deletion of the two high density elements of the 1986 LCP, the remaining medium density segment (Midbayfront area) was rendered virtually undevelopable from an economic point of view, even in terms of 1986 dollars.
- Z15 (5) Accordingly, for a project on this property to be economically feasible today, the densities must be substantially higher than was approved for the 1986 project.
- VIII. IMPACT ANALYSIS PROCEDURE AND TERMINOLOGY
- The DEIR concludes that the potential impacts for a wide range of physical factors (geology, soils, hydrology, ground water, and water quality) are "Significant and Unmitigable" on the basis that detailed design information is not yet available. This judgment, in our view, does not conform to generally acceptable impact analysis procedures, and uses some terminology in a non-standard way.
- Z16 As explained in our comments on the Draft EIR contained in Attachment A this letter, these various potential impacts are, in fact, readily avoidable by the use of conservative engineering design practice and compliance with the requirements of the City of Chula Vista's appropriate codes. These code requirements must be met in order for the project to be approved for construction. Conditions of approval are normally used to assure appropriate mitigation. Thus, these various impacts should be adjudged "potentially significant but mitigable".
- Z17 It is noteworthy that the City's EIR consultant went to considerable lengths (at the September 6, 1990 presentation to the Redevelopment Agency) to explain that this usage of "Significant and Unmitigable" is a "special" usage of this term as distinguished from its normal usage. It is also noteworthy that this "special" usage of the term is not explained in the EIR document.

- Z12 The certified LCP did allow for a hotel of up to 12 stories on Gunpowder Point, but since that hotel was to be located on a 14-acre site, the development intensity would be relatively low (a maximum floor area ratio of .25). In addition, the certified LCP included one marina on the "D" Street Fill and the intensity of marine-related uses was regulated by a floor area ratio of .25, which would allow only relatively modest intensity. Also see response to comment Z11.
- Z13 This comment is noted. It is our understanding that the certified LCP's designations for Gunpowder Point and "D" Street Fill were based on the City's desire to achieve Coastal Act goals of providing visitor serving commercial uses rather than to provide increased development intensity in those areas.
- Z14 This comment is noted, and is not relevant to the EIR.
- Z15 This comment is noted.
- Z16 The DEIR text and tables have been modified to clarify that some significant impacts which were previously found to be "unmitigable," are now termed "mitigable, but not mitigated at the program level."
- Z17 The September 6, 1990 presentation did not explain that the use of the terminology was "special," rather, the EIR consultant explained to the Redevelopment Agency that some of the impacts deemed unmitigable could probably be mitigated at the project level. As explained in Response Z16, the text and tables of the DEIR have been modified to reflect the anticipated ability to mitigate at a future project level.

- Z18** In the CEQA process, the term "Significant and Unmitigable" has a specific meaning and, when used in the EIR conclusions as to impacts, connotes an impact that requires findings of overriding considerations by the responsible decision making body.
- For these reasons, we believe it is inappropriate to initiate the use of the term in the Draft EIR which is not explained in the document and apparently not sanctioned by CEQA or the CEQA Guidelines. In addition, this "innovative" usage, to the best of our knowledge, is without precedent.

IX. ORGANIZATION: SEQUENCE OF PRESENTATION

- Z19** As pointed out above, because the DEIR addresses an Amendment to an existing Certified LCP, the introductory section of the Final EIR should summarize the major elements of the existing LCP and the major findings of the Final EIR certified by the City in connection with that LCP.

X. PREMATURE SPECIFICITY OF CERTAIN RECOMMENDATIONS

- Z20** Certain of the "Mitigation Requirements" pertaining to potential impacts on biological resources are premature in terms of the degree of specificity of the recommendation. For example, Requirement 26 (Page 3-115 of the DEIR) addresses the need to offset impacts associated with potential encroachment, predation, and loss of habitat use by avian species as a result of construction of the CVI Midbayfront project and stipulates creation of 13.2 acres of new marshland, mudflat and salt pond habitats on Gunpowder Point.

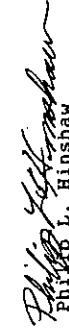
- Z21** CVI has acknowledged (LCPR No. 8 at Page II-100) that creation of restoration and enhancement of new wetlands and related wildlife habitat may be necessary in order to offset impacts associated with the project.

- Z22** Determining the size, type, and location of habitat to be restored is a complex matter which involves a careful balancing of a number of biological and physical factors. CVI is currently working with USFWS and other resource agencies to determine the preferred location and mix of habitat types and sizes that will be appropriate as mitigation. When planning is complete, the results will be documented in the Habitat Restoration and Management Plan contractual document described earlier. In view of the ongoing nature of the discussions regarding mitigation, the specificity of this recommendation seems premature.

- Z18** See Response Z17.
- Z19** See Response Z9.
- Z20** See Response W66.
- Z21** Comment noted.
- Z22** See Response W66.

Our consultant team will provide any information or assistance that will be helpful to you in preparing the response to comments. If we can be of any assistance, please contact me.

Sincerely,
A.D. HINSHAW ASSOCIATES


Phillip L. Hinshaw

Attachments:

- A. EIR Comments
- B. List of Preparers
- C. Revised Phasing Plan
- D. Limited Groundwater Supply Report
(Will be delivered prior to 9/28/90)
- E. Revised Pilot Plan

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ATTACHMENT A

MIDBAYFRONT LCP RESUBMITTAL NO. 8

EIR COMMENTS

SECTION 1.2 SUMMARY OF IMPACTS AND MITIGATION

Page 8, Fourth Paragraph

Z23 In the middle of this paragraph is a sentence that reads,

"On the north side, adjacent to the wetland, natural vegetation should exist with no grassy areas or other landscaping in order to discourage public use for reasons of public safety (discourage transient use) and wetland resource protection."

This statement is taken from page 3-160, second paragraph.

We believe that some appropriate non-invasive natural vegetation (landscaping) could be installed in this area to enhance the visual character of the site. We suggest that the mitigation measure be reordered as follows,

"On the north side, adjacent to the wetland, natural vegetation should exist with no grassy areas or landscape design which would be incompatible with the wetlands in order to discourage public use for reasons of public safety (discourage transient use) and wetland resource protection. Landscaping in this area should consist of indigenous materials."

SECTION 2-4 PROJECT PHASING

Page 2-9 Phasing

Z24 The phasing sequence listed on pages 2-9 through 2-11 of the EIR should be corrected to reflect the revised project as shown on the following pages.

NOTE: The following pages contain a comparison of the project as shown on pages 2-9 to 2-11 of the EIR and the revised project shown on the attached plot plan. The comparison shows the percentage reduction in density and the height reduction in feet and no. of stories.

PHASE I (10 YEARS/1991-2000)

| PROJECT ELEMENTS: | REVISED PROJECT PHASING - SEPTEMBER 26, 1990 | | | | ORIGINAL PROJECT SUBMISSION - AUGUST 1, 1990 | | | | CHANGE |
|---|--|-----|-------|---------|--|-------|-------|-------------|-----------|
| | Sq. Ft. | Rms | Units | Parking | Sq. Ft. | Rms | Units | Parking | |
| MAIN LAGOON | 10.0 AC | | | | | | | | |
| BOTELS | | | | | | | | | |
| Atrium (600+600/25) Extended (300+300/25) | 488,000 | 600 | 624 | 488,000 | 600 | 624 | 312 | 244,000 | 0 |
| TENNIS CLUB/TRAINING CENTER | 137,000 | | 816 | 137,000 | | 816 | | | 0 |
| Dormitory (50 Units #1/Unit) 50 | | | | | | | | | |
| Stadium Court (2,000 seats #1/3.5 Seats) 571 | | | | | | | | | |
| General Area (97,000 \$2/1,000) 195 | | | | | | | | | |
| RESIDENTIAL "A" | | | | | | | | | |
| (1 Br-215x1.5) 323 (2 Br-120x2.0) 240 | 324,000 | | 335 | 563 | 316,000 | | 326 | 541 | +9 Units |
| RESIDENTIAL "E" | | | | | | | | | |
| (1 Br-164x1.5) 246 (2 Br-154x2.0) 308 | 308,000 | | 318 | 554 | 248,500 | | 257 | 422 | +61 Units |
| RETAIL CENTER (5/1,000) | 145,000 | | 725 | 145,000 | | 725 | | | 0 |
| OVERLOOK PARK (end of "F" St) | 8.2AC | | 33 | 4.5AC | | 333 | | -300 Spaces | |
| CONFERENCE CENTER | 40,000 | | 530 | 40,000 | | 530 | | | 0 |
| Assembly Area (25,000 #1/50sf) 500 | | | | | | | | | |
| General Area (15,000 \$2/1,000) 30 | | | | | | | | | |
| ROER INDUSTRIES | 305,000 | | 1,041 | 305,000 | | 1,041 | | | 0 |
| Corporate Headquarters (245,000 \$3.3) 809 | | | | | | | | | |
| Credit Union (40,000 \$3.3) 132 | | | | | | | | | |
| (20,000 \$5.0) 100 | | | | | | | | | |
| VENER POND PARK | 7.8AC | | 48 | 7.2AC | | 27 | | +.6AC | |

REVISED PROJECT PHASING - SEPTEMBER 26, 1990

| PROJECT ELEMENTS: | REVISED PROJECT PHASING - SEPTEMBER 26, 1990 | | | | ORIGINAL PROJECT SUBMISSION - AUGUST 1, 1990 | | | | CHANGE |
|----------------------------------|--|-----|-------|---------|--|-----|-------|---------|---------|
| | Sq. Ft. | Rms | Units | Parking | Sq. Ft. | Rms | Units | Parking | |
| NATURE CENTER PARKING | | | 54 | | | | 54 | | 0 |
| TREETS | | | | | | | | | |
| *Marina Parkway | | | | | | | | | |
| *F Street | | | | | | | | | |
| Bay Boulevard | | | | | | | | | |
| Gunpowder Point Drive | | | | | | | | | |
| Restripe "E" Street | | | | | | | | | |
| Widen N/B "E" Street | | | | | | | | | |
| Interior Street System | | | | | | | | | |
| CO-GENERATION PLANT | | | | | | | | | |
| "F"- "G" ST. MARSH & RESTORATION | | | | | | | | | |
| Sub-total | 1,991,000 | 900 | 653 | 5,552 | 1,923,500 | 900 | 583 | 5,344 | +67,500 |

PHASE II (4 YEARS/2001-2004)

| REVISED PROJECT PHASING - SEPTEMBER 26, 1990 | | | | | ORIGINAL PROJECT SUBMISSION - AUGUST 1, 1990 | | | | | CHANGE |
|---|-----------|-----|-------|---------|--|-----|-------|---------|--|-----------|
| PROJECT ELEMENTS: | Sq. Ft. | Rms | Units | Parking | Sq. Ft. | Rms | Units | Parking | | |
| ATHLETIC FACILITY | 69,000 | | | 1,442 | 69,000 | | | 1,442 | | 0 |
| Ice Rink (5,000 seats @1/3.5 seats) 1,428 | | | | | | | | | | |
| Child Care (7,000 @2/1,000) 14 | | | | | | | | | | |
| ROBB INDUSTRIES | 195,000 | | | 480 | 195,000 | | | 480 | | 0 |
| Corporate Building (115,000 @3.3/1,000) 380 | | | | | | | | | | |
| Manufacturing Facility (80,000 @1/800) 100 | | | | | | | | | | |
| APARTMENTS "D" | 84,000 | | 87 | 152 | 60,000 | | 62 | 103 | | +25 Units |
| (1 Br-45x1.5) 68 (2 Br-42x2.0) 84 | | | | | | | | | | |
| RETAIL & RESIDENTIAL LAGOON | 5,000 | | | 25 | 5,000 | | | 25 | | 0 |
| RESIDENTIAL LAGOON | | | | | | | | | | |
| OFFICE | 60,000 | | | 198 | 60,000 | | | 198 | | 0 |
| (60,000 @3.3/1,000) 198 | | | | | | | | | | |
| Sub-total Phase II | 413,000 | | 87 | 2,297 | 389,000 | | 62 | 2,248 | | +24,000 |
| Sub-total Phases I,II | 2,404,000 | 900 | 740 | 7,849 | 2,312,500 | 900 | 645 | 7,592 | | +91,500 |

PHASE III (4 YEARS/2005-2009)

| REVISED PROJECT PHASING - SEPTEMBER 26, 1990 | | | | | ORIGINAL PROJECT SUBMISSION - AUGUST 1, 1990 | | | | | CHANGE |
|--|-----------|-------|-------|---------|--|-------|-------|---------|--|----------|
| PROJECT ELEMENTS: | Sq. Ft. | Rms | Units | Parking | Sq. Ft. | Rms | Units | Parking | | |
| RESORT HOTEL (460+460/25) | 374,000 | 460 | | 479 | 510,000 | 628 | | 653 | | -168 Rms |
| APARTMENTS "B" (1 Br-167x1.5) 251 (2 Br- 82x2.0) 164 | 240,000 | | 248 | 415 | 297,000 | | 307 | 510 | | -59 Rms |
| BUFFER PARK (N. of Res. Village) | 7.2AC | | | 20 | 7.2AC | | | 0 | | 0 |
| WIDEN S/B I-5 OFFRAMP @HARINA PARKWAY | | | | | | | | | | |
| SDG&E ROW IMPROVEMENT | | | | | | | | | | |
| Sub-total Phase III | 614,000 | 460 | 248 | 914 | 807,000 | 628 | 307 | 1,163 | | -193,000 |
| Sub-total Phases I,II,III | 3,018,000 | 1,360 | 988 | 8,763 | 3,119,500 | 1,528 | 952 | 8,755 | | -101,500 |

| PHASE IV (4 YEARS/2009-2012) | | | | | ORIGINAL PROJECT SUBMISSION - AUGUST 1, 1990 | | | | |
|---|--|-------|-------|---------|--|-------|-------|---------|-----------|
| PROJECT ELEMENTS: | REVISED PROJECT PHASING - SEPTEMBER 26, 1990 | | | | Sq. Ft. | Rms | Units | Parking | CHANGE |
| | Sq. Ft. | Rms | Units | Parking | | | | | |
| LUXURY HOTEL (190+190/25) | 155,000 | 190 | 198 | 198 | 204,000 | 250 | 260 | 260 | -50 Rms |
| APARTMENTS "F" (1 Br-96x1.5) 144 (2 Br-18x2.0) 36 | 111,000 | | 114 | 180 | 125,000 | | 129 | 215 | -15 Units |
| OFFICE & CITY SITE (80,000 \$3.3/1,000) 264 | 80,000 | | 264 | | 80,000 | | 264 | | 0 |
| SDG&E ROW IMPROVEMENT | | | | | | | | | |
| HUPPER PARK PARKING | | | 0 | | | | 41 | | |
| Sub-total Phase IV | 346,000 | 190 | 114 | 642 | 409,000 | 250 | 129 | 780 | -63,000 |
| Sub-total Phases I,II, III,IV | 3,364,000 | 1,550 | 1,102 | 9,405 | 3,528,500 | 1,778 | 1,081 | 9,535 | -164,500 |

| PHASE V (3 YEARS/2012-2014) | | | | | ORIGINAL PROJECT SUBMISSION - AUGUST 1, 1990 | | | | |
|--|--|-------|-------|---------|--|-------|-------|---------|-----------------|
| PROJECT ELEMENTS: | REVISED PROJECT PHASING - SEPTEMBER 26, 1990 | | | | Sq. Ft. | Rms | Units | Parking | CHANGE |
| | Sq. Ft. | Rms | Units | Parking | | | | | |
| APARTMENTS "C" (1 Br-218x1.5) 327 (2 Br- 80x2.0) 160 | 288,000 | | 298 | 487 | 380,000 | | 393 | 652 | -95 Units |
| INN (250+250/25) 260 | 204,000 | 250 | 260 | | 204,000 | 250 | | 260 | 0 |
| WIDEN BAY BLVD.. | | | | | | | | | |
| WIDEN N/B I-5 OFFRAMP #*# STREET | | | | | 73,500 | | 76 | 114 | -76 Units |
| APARTMENTS "G" @ END OF "F" ST.. | | | | | | | | | |
| Sub-total Phase V | 492,000 | 250 | 298 | 747 | 657,500 | 250 | 469 | 1,026 | -165,500 |
| Total Phases I,II,III, IV,V | 3,856,000 | 1,800 | 1,400 | 9,852 | 4,186,000 | 2,028 | 1,550 | 10,561 | -330,000 (7.9%) |
| Total Parks | 23.2AC | | | | 18.9AC | | | | +4.3AC |
| Total Park Parking | | | 101 | | | | 401 | | -300 Spaces |

SECTION 3.1 GEOLOGY/SOILS/GROUNDWATER

Page 3-5, First Paragraph

Z25 The impact of ground settlement is generally limited to those areas underlain by compressive surficial and alluvial deposits. Numerous mitigation measures are available to reduce the potential for post-construction settlement depending on the soil and site conditions. Detailed recommendations for mitigation measures will be presented within site-specific geotechnical reports. The likelihood of ground settlement on structures founded on formation soils of the Bay Point Formation and/or on engineered fill soils overlying the formational deposits is considered to be low given the available data.

Page 3-8, Fourth Paragraph

Z26 The hazard of structural damage resulting from seismic shaking is significant for any proposed development in seismically active regions such as Southern California. The risk of seismic damage may be significantly reduced through standard seismic design techniques based on the soil and geologic conditions and the intended land use.

The seismic stability of perimeter slopes which are underlain by soft compressible soils is a significant issue and will require analysis and mitigative design prior to construction.

Based on the geotechnical and seismic information available to date, the potential for liquefaction occurring at the site appears to be low. Clean granular soils are present within the Bay Point Formation, and under severe seismic conditions, would be susceptible to liquefaction. The potential for seismic hazards and mitigative measures where required will be discussed in detail within site-specific geotechnical reports.

Page 3-8, Sixth Paragraph

Z27 The measured water level variations in Well PW-A installed at the site demonstrate maximum fluctuations of approximately 1 foot (see Geocon 1, next page). The well is approximately 350 feet from the existing Mean Lower Low Water (MLLW) tide elevation in San Diego Bay. Water level variations are expected to decrease exponentially with distance away from the Bay. Therefore the stated potential water level variation of 3 to 4 feet impacting subterranean parking structures located 700 + feet from San Diego Bay is unlikely.

Z28 Water obtained from production Well PW-A was tested for organochlorine pesticides and polychlorinated biphenyls (PCBs) using EPA Method 8080. The above compounds were not observed at concentrations above the laboratory detection limits. Water samples obtained from the Monitoring Wells MW-N, MW-E, and the

Z25 Comment acknowledged. Evaluation of site-specific geotechnical conditions will need to be performed at the project level.

Z26 Comment acknowledged.

Z27 Comment acknowledged. The additional data regarding groundwater fluctuations in response to tidal variations provide a useful indicator of the transmissivity of the aquifer ultimately affecting groundwater fluctuation driven by tidal variations in San Diego Bay. It is, however, important to note that groundwater recharge from landscaping and other inland water sources will tend to elevate groundwater above mean sea level, and proposed construction activities associated with subterranean parking, having finished floor elevations of 30 feet (MSL datum), will probably extend down to (or be influenced by) a relatively shallow groundwater surface. The comments listed under "Groundwater Constraints," pp. 3-7 and 3-8 of Volume II, are more of a precautionary nature, and would be considered by any prudent engineering consultant.

Z28 Comment acknowledged. Refer to General Responses 3.2.3.1 (Water Quality and Water Treatment and Monitoring).

Production Well PW-A were tested for the presence of volatile organic compounds (e.g., TCE). None were detected above laboratory detection limits. These wells are located in the area proposed for groundwater extraction for the proposed lagoon.

Page 3-9, First, Second & Third Paragraph

Z29 Measurements of tidal fluctuations have been performed at the site. The maximum total tidal fluctuation noted in PW-A was approximately one foot (peak to trough). These variations were observed during Spring tide conditions when the water level in San Diego Bay varied by approximately six feet. A graph depicting the measured water level in the water well versus the Bay tides is included in the September, 1990 groundwater supply report submitted to CVI by Geocom.

Page 3-11, First Paragraph:

Z30 This paragraph states that,

"to completely mitigate potential impacts to a level below significant, detailed site and engineering design and detailed soils and geotechnical studies must be prepared by a soils engineer for addressal of site constraints."

The rest of the page, and the following page contain nine mitigation measures. At the end of each measure there is a parenthetical statement identifying which impacts are mitigated by the measure.

These nine measures are summarized on page 3-12 following an introduction that states,

"Mitigation measures are available to reduce the identified impacts to a level below significant."

In summary, these measures provide for the preparation of plans and implementation of all standard engineering designs and recommendations, as well as specific measures concerning foundations, soil modifications and embankment stability.

Z29 Comment acknowledged. Refer to Letter Response Z27.

Z30 Following the list of measures on pg. 3-11 of Volume II it is also stated,

In the absence of site specific grading plans and geotechnical studies, it is not possible to conclude that grading, drainage, geotechnical impacts and seismic risk can be mitigated to a less than significant level with the information provided at the plan-level EIR.

However, as previously described in Responses Z16 and Z17, the text has been modified to state that these impacts are mitigable, but not mitigated at the program level.

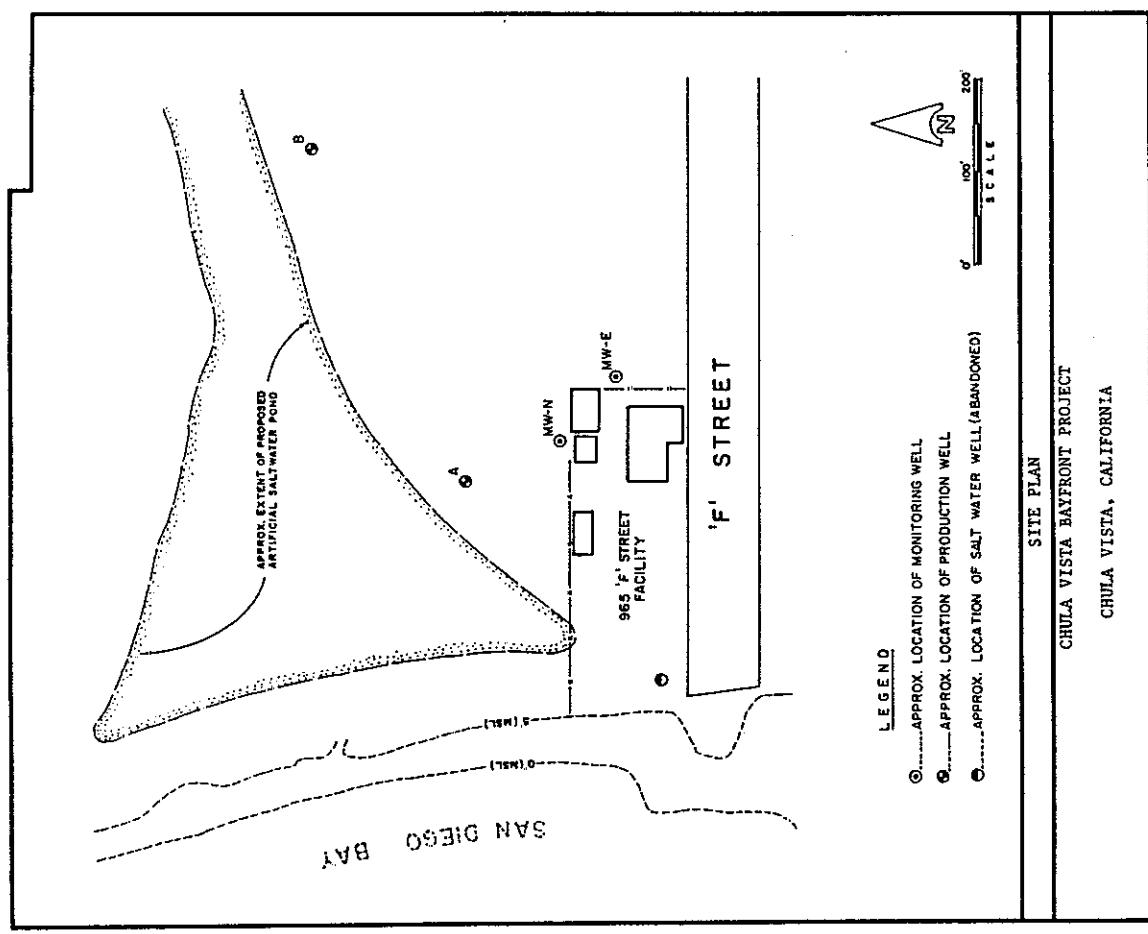


Figure 2

Page 3-13, Last Paragraph:

Z31 This paragraph reads,

"In the absence of site specific grading plans and geotechnical studies, it is not possible to conclude that grading, drainage, geotechnical impacts and seismic risk can be mitigated to a less than significant level".

This statement is not consistent with the language of page 3-11 that states that impacts are mitigable provided that the recommended measures are implemented. Furthermore, the above statement is contained in the "Summary" matrix (Table L-1, pg. 1). The "Summary" text (Table 1-2, pg. 1) contains the mitigation measures listed on pages 3-10 through 3-12 and indicates that the impacts are mitigated by the recommended measure.

Consequently, the final statement in the Geology/Soils/Groundwater section of the EIR is not supported by the preceding information, and is, in fact, a contradiction of the previous text. We believe that the recommended mitigation measures are appropriate and do provide for mitigation to a less than significant level.

Page 3-13, Last Paragraph:

Z31

See Response Z30.

SECTION 3.2 HYDROLOGY/WATER QUALITY

Page 3-15 – Third Paragraph

Z32 The third paragraph states,

"The proposed gravity pipe, at a minimum slope of 3 inches per 100 feet (0.25%), is inconsistent with the City's Subdivision Manual which requires a minimum slope of 6 inches per 100 feet (0.5%)."

While it is true that the City's Subdivision Manual notes a minimum gradient of 0.5%, it is reasonable to allow flatter grades than this at areas near the bay where it is difficult to achieve these standards. Examples of pipes in the vicinity of the proposed project that are flatter than 0.5% are (1) the 54" RCP outletting into the southwest corner of the "F-G" Street Marsh with a gradient of 0.2%, and (2) the 84" RCP outletting into the "J" Street Marina at the southwest corner of Marina Parkway and Sandpipe Way, with a gradient of 0.1%. The Environmental Impact Report should state that allowing gradients less than the City standard should be left to the discretion of the City Engineer. In fact, City staff has agreed that at the bayfront, some flexibility is allowable.

Page 3-16 – First Paragraph, Line 3

Z33 It is intended that oil and grease trap inlets and/or cleanouts be used at key pickup points and outlet locations before conveying storm runoff to the desilting basin or the bay. (See Page 3-18 – Paragraph 4). The drainage study showed conceptual details of structures for this purpose. From additional research it appears that a 3 chambered structure will be used. The location of these facilities would be determined in final design and conform to the City Engineer's requirements.

Page 3-16 – Third Paragraph

Z34 This section discusses a concern about the Still Water Level (SWL) and incorporating it and wind wave effect into the project design. The Environmental Impact Report author may not be aware of the fact that the project topography is on USC & G Land datum with mean sea level at elevation 0.00. Tide and bay charts are on USC & G bay datum with mean sea level being 2.88.

The project dike between the bay and the lagoon is at an elevation of approximately 10.0+ MSL (USC & G Land datum). Record highest tide of 7.79 USC & G Bay datum translated to land datum is 4.91 MSL. In other words, the dike at 10.0 is 5.09 feet above record highest tide. The project therefore has 5.09 feet of freeboard to accommodate reduction in barometric pressure, wind and wave setup and rising sea level. Attached is a copy of City of San Diego

Z32 Comment is acknowledged regarding discretion of the City Engineer in allowing variations from requirements in the City Subdivision Manual. It is, however, important to note the following items concerning relatively flat gradients:

- Relatively flat gradients result in correspondingly slow velocities of storm runoff within the drain pipes. With slow velocities (less than approximately 2 feet per second), a corresponding problem develops associated with siltation in the pipe. This siltation can lead to eventual plugging of this portion of the drain line, which in turn renders the entire site drainage design inoperative.

Therefore, after the subsurface gravity drainage system no longer functions primarily due to the subsurface system filling up with water from storm runoff, subsequent runoff then flows down streets and other low-lying ground as overland flow to areas of lower topography.

- The proposed gravity system discharges into San Diego Bay with an invert near elevation +1 foot MSL, which, during tidal highs, will become submerged and rendered somewhat less effective. Clearly, the applicant's civil engineer is trying to keep the invert of the discharge pipe above the normal bay level; however, even as designed, the invert of the discharge pipe will occasionally be under water. As with relatively flat slopes, a submerged discharge pipe will encourage siltation where discharge waters slow down and allow suspended sediments or other debris to settle out.

- Relatively flat slopes are more susceptible to post-construction settlement which will locally tend to reduce pipe gradients, again resulting in the potential for siltation.

To mitigate this potential for siltation and blockage of low-gradient drain pipes, the applicant will be required to re-evaluate the entire drainage system based on a plugged subsurface gravity storm drain system and all drainage carried by flow within streets and as overland flow, with the requirement that this scenario can safely accommodate on-site storm drainage in surface streets and as overland flow without adversely affecting proposed improvements.

As an alternative mitigation measure, and in view of the fact that the applicant has committed to semi-annually cleaning the oil and grease traps, it is appropriate to provide at least an annual pipe inspection program where pipes with flatter gradients are inspected with a video camera, and any siltation problems cleaned prior to the following rainy season.

As an additional alternative mitigation measure, the applicant may elect to raise finish ground grades, predominantly at the eastern portion of the project. This will provide adequate vertical height across the site to allow construction of drain lines with the standard fall of 0.5 percent, as required by the City's Subdivision Manual.

Z33 Comment acknowledged. Refer to General Responses 3.2.1.1 through 3.2.1.2.

Z34 The applicable issues stated in the Environmental Impact Report associated with the specific selection of a design still water level (SWL), and the predictable wave runup which may overtop relatively low structures are not addressed in the information provided. We are mindful of the difference in datums and, throughout the Environmental Impact Report, have used the City of Chula Vista's datum, mean sea level (MSL).

As indicated in the DEIR, the design still water level represents the highest level surface that water within the bay (adjacent to the site) may reach during the useful life of the proposed improvements. The SWL should include the astronomical high tide, additional increases associated with reduction in barometric pressure, and wind and wave setup, as well as any increases associated with the rise in sea level. In order to more clearly address this comment, a general overview of the methodology in selecting a design still water level is presented herein.

Tides in south San Diego Bay vary over a 9-foot range; the highest astronomical tide for the vicinity being 4.7 feet (MSL datum) (NOAA Report - A Climatology and Oceanographic Analysis of the California Pacific and Outer-Continental Shelf Region - September 1980).

Significant additional increases in still water level may occur due to meteorological influences predominantly affected by wind stress acting on the sea surface and the local reduction in barometric pressure. These two meteorological conditions, typically referred to as storm surge, may have a significant effect on relatively sheltered coastal embayments.

Extreme astronomical tides and storm surges are presented as a function of return period at selected California tide stations in the 1980 NOAA studies, with those for San Diego shown below:

| RETURN PERIOD - YEARS | STORM SURGE FEET |
|-----------------------|------------------|
| 5 | 2.0 |
| 10 | 2.2 |
| 25 | 2.3 |
| 50 | 2.4 |
| 100 | 2.5 |

Astronomical tide and storm surge, when combined with tidal variations, result in a statistical extreme water elevation composed of astronomical tide and storm surge as follows (1980 NOAA report):

| RETURN PERIOD - YEARS | EXTREME WATER ELEVATION - FEET (MSL DATUM) |
|--------------------------|--|
| 5 | 5.0 |
| 10 | 5.2 |
| 25 | 5.4 |
| 50 | 5.6 |
| 100 | 5.7 |

In conversations with personnel from the City of San Diego, combined high tides plus storm surge on January 27, 1983 resulted in water levels within Mission Bay on the order of 5.6 to 5.8 feet, suggesting that similar water surfaces existed within south San Diego Bay during that same period.

Wave setup results from the super elevation of the water surface over the normal surge elevation due to onshore mass transport of the water by wave action alone. Wave setup is a function of the design breaker height and wave period. Design waves within San Diego Bay are likely to have wave periods on the order of 3 seconds, with wave heights on the order of 3 feet. Typical values for wave setup may approach 0.4 feet for the Midbayfront site.

Considerable research is currently being devoted to rising sea level and its very significant impact on our coastal resources. Two extremely worthwhile publications which provide a good overview of the subject include "Responding to Changes in Sea Level - Engineering Implications," published by the Committee on Engineering Implications of Changes in Relative Mean Sea Level of the Marine Board Commission on Engineering and Technical Systems, National Research Council, 1987, and the "Draft Report: Planning for an Accelerated Sea Level Rise Along the California Coast," prepared by staff of the California Coastal Commission, June 26, 1989.

Although considerable debate still exists regarding a reasonable design value to account for sea level rise, typical design values might vary from 1/2 to 1 foot. Thus, a reasonable design still water level for the Midbayfront site might be on the order of 7.0 feet (MSL).

On top of the design SWL, wind-driven waves from within San Diego Bay when impacting upon shoreline structures will result in some amount of predictable wave runup which may overtop relatively low structures. Wave runup is measured above the design SWL, and is strongly dependent upon the type of shoreline structure, seafloor bathymetry fronting the structure, and the wave environment. Considerable information regarding wave runup can be found in the U.S. Army Corps of Engineers Shore Protection Manual. Some amount of predictable wave

runup will probably overtop the entire westerly margin of the Midbayfront site, which ranges from elevation +10 to +11 feet. The applicant should address this impact at the project level when proposing a specific design.

Drawing P-15 that shows the relationship between USC & G Land and USC & G Bay datums (See Attachment R.E.C.1).

Page 3-17 - First Paragraph

Z35 The first paragraph of this section discusses the outfalls to San Diego Bay, and contains a misinterpretation of the outfalls. The computer formatted drainage study submitted by Rick Engineering Company, automatically sizes the storm drain pipe in each run. The sizes noted in this section of the Environmental Impact Report are the computer generated size. In order to conform to the 404 permit (#88-267-RH) and because of grade constraints, the 27-inch pipe will actually be a 24-inch pipe and the 42-inch pipe will actually be twin 36-inch pipes (these outfalls will conform to the 404 permit copy attached) (See Attachment R.E.C.2).

The Rick Engineering Company study analyzed both pipe systems flowing under pressure to insure that these systems would meet City standards for pressure flows.

It is intended that 0.25% be the minimum storm drain gradient. The section of pipe referred to in this paragraph would be revised in final design.

Page 3-18 - Second Paragraph

Z36 Lines 4 and 5 note that the City Engineer requires that drainage calculations be done for the 100-year design storm; we are not aware that this is the case. Storm drain design is stipulated by Section 5 of the "Subdivision Manual - City of Chula Vista". On page 59 of said manual it clearly states, "a 50-year ultimate storm head without causing substantial damage to surrounding property".

The last two sentences of paragraph two states that the runoff coefficient of 0.45 is in error, and suggests that a coefficient of 0.75 should be used.

The area draining to node 303 is a public park and will be vegetated as such. The suggestion of using 0.75 is not correct. This coefficient (per City of Chula Vista manual) is for dense residential or barren hilly slopes. The majority of the 4.5 acre park is at a gradient of 1.0% and will be vegetated and the corresponding City coefficient is 0.45.

Z35 Comment Acknowledged. Refer to Letter Response Z32.

Z36 Comment acknowledged regarding 100-year design storm and runoff coefficient.
Text has been corrected to reflect existing City requirements.

However, as noted in the text on pg. 3-20 of Volume II, the Federal Emergency Management Act (FEMA) and prudent engineering practice require that drainage calculations should be performed for the 100-year design storm, and possible effects on site improvements evaluated. That is, a drainage system designed for a 50-year event will be operating at capacity during that event. Any storm water in excess of the 50-year event will exceed the capacity of the drainage system. This "excess" storm water will then travel through the site as surface runoff.

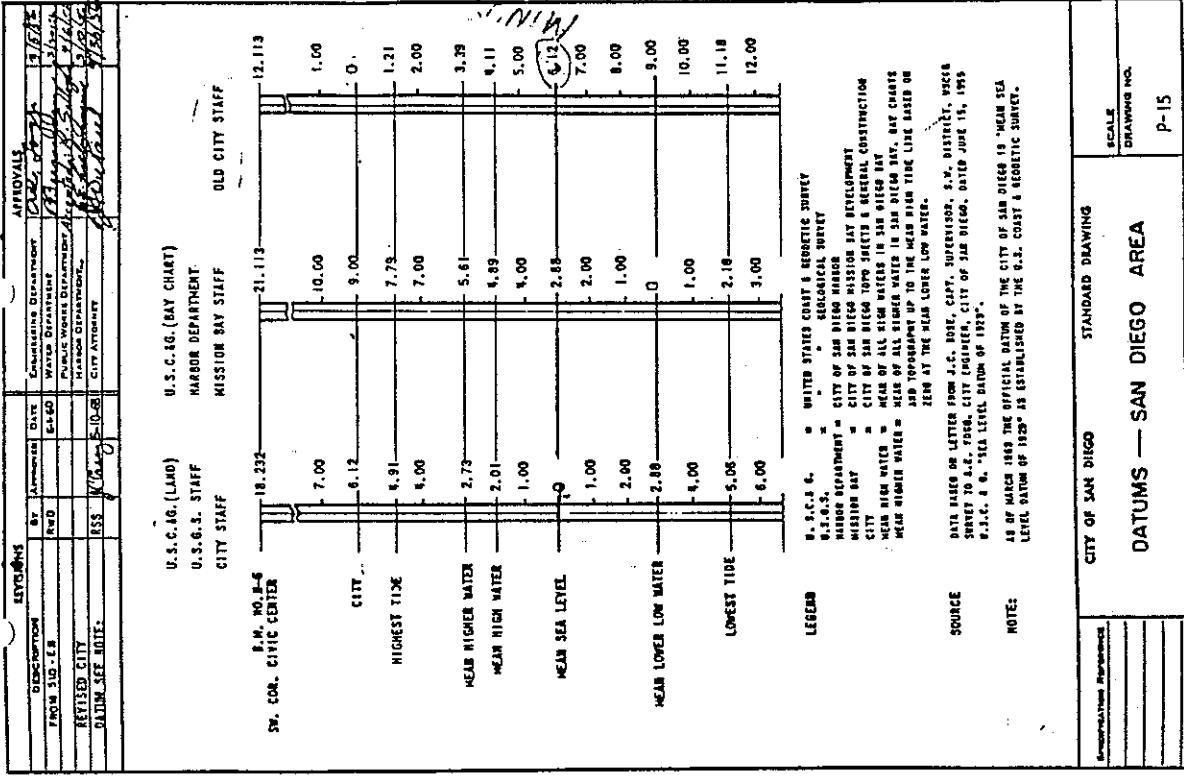
The purpose of evaluating the results of this excess flow is to ensure that overall site drainage allows the excess flow to be discharged from the site, e.g., via drainage swales, streets, etc., without significantly impacting site improvements (commercial and residential structures, etc.)

This provision for runoff from major storms has been succinctly put forth in the Drainage Criteria Manual of the Denver Regional Council of Governments. They state:

"Where the 100-year storm is not chosen for design purposes, the impact of the 100-year storm shall be investigated and made known." "In addition to providing the storm drainage facilities for the initial storm runoff lot, design storm...provisions shall be made to obviate major property damage and loss of life for the storm runoff expected to occur once each 100 years." (Denver Regional Council of Governments, March 1969).

FEMA requirements include 1 foot of freeboard between the peak elevation of the 100-year storm event, and the lowest elevation of any structures subject to damage by flooding. This criteria is generally considered as an appropriate performance standard, and should be implemented by the applicant at the Midbayfront site.

REC. 1



Page 3-19, Third Paragraph:

Z37 This paragraph, and the following paragraphs, discuss groundwater impacts and water quality issues. The conclusion of the discussion (Page 3-20, 1st paragraph) is that, "The limited information with potential groundwater contamination creates a potentially significant impact."

Additional information has been acquired through further testing and acquisition of data in July and September, 1990. This information is contained in a Geocon report entitled "Limited Groundwater Supply Report for Chula Vista Bayfront Project" Correspondence from Geocon to Chula Vista Investors (dated 9/24/90) summarizes the results of the further studies (see Attachment D).

Page 3-19, Third Paragraph (cont'd.)

Z38 This paragraph also states that, "... it is likely that chlorinated hydrocarbons and possible measurable concentrations of TCE, may also exist in the aquifer proposed for extraction of ground water for support of the salt water lagoon". The Geocon Letter (9/24/90, Attachment D) contains the following information relative to this concern.

"Water samples obtained from three of the four monitoring wells located in the Rohr Industries property immediately south of the southeast corner of the CVI property possessed concentrations of trichloroethane (TCE) at levels 2 to 10 times the State of California Action Level of 5 micrograms per liter, (mg/l). However, it should be recognized that the samples were obtained on April 1, 1988; additional samples were obtained by Geocon as described below.

"Water samples and water level measurements were obtained on August 30, 1990 by Geocon from Wells PW-A, MW-N, and MW-E to evaluate the potential for VOC impacts. Well PW-B was not sampled for chemical constituents as described previously. Concentrations of VOC's were not detected above laboratory detection limits in the water samples obtained from PW-A, MW-N, or MW-E."

Page 3-20, Third Paragraph:

Z39 This paragraph states that,

"The following measures are required to reduce the identified potentially significant hydrologic impacts to a level below significant".

The rest of the page, and the following page contain seven mitigation measures. At the end of each measure there is a

Z37 Comment acknowledged. Additional data from GEC have been incorporated into this document. Refer to General Responses 3.2.3 through 3.2.3.10.

Z38 Comment acknowledged. Additional data from GEC has been incorporated into this document. Refer to General Responses 3.2.3 through 3.2.3.10.

As noted by GEC (refer to General Response 3.2.3.1, Water Quality), "the potential exists for groundwater impacts from VOCs to be present within the aquifer of the project site...the potential for impacts to the well field from migration of VOCs, and other potential sources of impacts, is uncertain." General Response 3.2.3.6 states that "the potential exists for the migration of impacted groundwater into the southeast portion of the CVI site in the area adjacent to the impacted property." General Response 3.2.3.7 states that "the potential exists that VOCs may be transported via groundwater towards the proposed well field."

This although groundwater underlying the Midbayfront site has not been found to have been impacted by contaminants, GEC indicates the need for additional testing and monitoring at the project level in order to better assess and characterize site conditions.

Z39 Comment acknowledged.

parenthetical statement identifying which impacts are mitigated by the measure.

These seven measures are summarized on page 3-12 following an introduction that states,

"Mitigation measures are available to reduce the identified impacts to below a level of significance."

In summary, these measures provide for the preparation of plans, studies and recommendations, as well as specific measures concerning grease traps and storm drains.

Page 3-21 - Paragraph 1, Second Sentence

The second sentence reads,

"Additionally, consideration should be given to the effects of relatively high velocity discharges from on-site storm drains discharging directly into San Diego Bay."

This statement is misleading from the stand point of drainage design. The outlets, as is noted in the drainage study, have exit velocities between 5 and 8 feet per second. These are not considered high.

Page 3-21 - Third Paragraph

This item notes that the storm drain system should be designed in accordance with City standards.

Z41 It should add that any changes to the standards would be made only at the discretion of the City Engineer (also see response for page 3-15, Third Paragraph).

Page 3-21 - Fifth Paragraph

Z42 This item discusses the operation of the detention basin and measures to keep contaminants out of the basin and "P-G" Street Marsh. Additional information concerning the listed measures is included as follows:

- Reduce contaminants prior to rainstorms by emptying and cleaning all baffle inlets and cleanouts in October and March.
- Increase street cleaning by sweeping streets and parking lots monthly.
- Clean parking lot catch basins frequently (at a minimum they will be cleaned in October and March).

- Regulate construction schedules as discussed in the LCP amendment.
 - Control erosion at new construction sites by including silt, fencing perimeters, sand bagging silt traps and basins, and vegetation of disturbed areas in the erosion control plan.
- Page 3-23, Third Paragraph

Z43 The groundwater supply report of September, 1990 addresses both quantity and quality issues. Overall, the water supply utilizing a series of wells located along the western (San Diego Bay side) of the property should be sufficient to meet the anticipated peak demand. A pipeline to the bay will not be required given that a groundwater supply can be provided for the proposed lagoons.

Page 3-23 - Fourth Paragraph

Z44 This item discusses City subdivision manual conformance and "error" at Node 303. See comments concerning page 3-15, third paragraph and page 3-18, second paragraph above.

Page 3-23, Last Paragraph:

Z45 This paragraph reads,

"In the absence of a detailed drainage plan, a site specific hydrology study, and a groundwater study, it is not possible to conclude that hydrology/water quality impacts can be mitigated to a less than significant level".

This statement is not consistent with the language of the previous pages that states that impacts are mitigable provided that the recommended measures are implemented. Furthermore, the statement is reflected in the "Summary" matrix (Table 1-1, pos. 1, 2). The "Summary" text (Table 1-2, Pgs. 2, 3) contains the mitigation measures listed on pages 3-20 through 3-22 and indicates that the impacts are mitigated by the recommended measure.

Consequently, the final statement in the Hydrology/Water Quality section of the EIR is not supported by the preceding information, and is, in fact, a contradiction of the previous text. We believe that the recommended mitigation measures are appropriate and do provide for mitigation to a less than significant level.

- Z43 Comment acknowledged. Refer to General Responses 3.2.3.1, Water Requirements of Lagoons and Anticipated Well Siting.
- Z44 Comment acknowledged. Refer to Letter Responses Z32, Z36, and Z41.
- Z45 Summary tables and text have been modified where appropriate in this document to reflect additional pertinent information provided subsequent to release of the DEIR.

SECTION 3.3 VISUAL AESTHETICS/COMMUNITY CHARACTER

Page 3-24, Second Paragraph

This paragraph includes the following five criteria that are to be considered in the "Visual Aesthetics/Community Character" analysis:

1. The spatial relationship of the assumed land uses within the site and surrounding area;
2. The conformance of the proposed project and alternatives with the planning issues and goals previously identified in the Chula Vista Bayfront Specific Plan and General Plan Update;
3. The degree to which the proposed project and alternatives preserve important bay views from major state travel routes and local city thoroughfares;
4. The degree to which the proposed project and alternatives will enhance or create new scenic public views; and
5. The degree to which the proposed project and alternatives will complement the site's shoreline location and the visual character and identity of the City of Chula Vista.

The analysis that follows in the EIR focuses on Criteria 3 and 4, and most of the emphasis is placed on Criterion 3. There is no supporting evidence in the EIR for any of the other criteria from which to assess the significance of impacts.

With respect to Criterion 1, the relationship of assumed uses to each other and to the surrounding areas presents no significant impact to the area's visual aesthetics/community character. If anything, it seems that the proposed uses and the physical manifestation of those uses would have a beneficial effect on Chula Vista's bayfront image as a water-related, tourist-attracting resort. In other words, the uses proposed for the site (hotels, recreational amenities, entertainment, retail, residential and limited office) and their visual character would result in a more beneficial impact than would a residential and commercial project as is allowed under the existing LCP.

The project appears to be in complete accord with the City's General Plan Update adopted on July 11, 1989. As stated in that plan (pg. 0-1), the Bayfront will be,

"...the water-oriented focal point for the entire city, with an emphasis on public recreation activities, tourism and conservation, it will emerge as the premier waterfront experience in South Bay. the diversity of uses will exceed that of many similar projects and contribute to its vitality and use by all citizens."

All five criteria were used in the evaluation of aesthetic/visual impacts. Criterion 1 takes into consideration the urban form and scale of the proposed uses to one another, as well as the actual types of uses proposed. Criterion 2 addresses the established building height limits for the study area, as well as the City's goals for the bayfront as the "water-oriented focal point for the entire City." Criterion 5 is addressed in the evaluation of the proposed project visual compatibility to adjacent or nearby areas of the City of Chula Vista.

Z46 See Response Z46.

Z47

- With this adopted General Plan language, Criterion 2 should be shown as a beneficial impact.
- Z48** With regard to the Proposed Project the EIR states that, "Aesthetic impacts on community urban form and image are considered significant, however, since the project will create an urban landscape that will, from the City's major transportation corridor, dominate the character and image of the City, a low profile, residential, suburban character" (pg. 3-37, paragraph 4).
- This conclusion is contradictory to Criterion 2 which addresses conformance with the General Plan.
- Z49** Criterion 3 concerns the views of the bayfront from State Routes (highways) and local transportation corridors. Plate 15 (KOP #6) shows the view of the site from I-5 northwesterly of the Mid-bayfront property. This view has now been somewhat restricted by the construction of the SR-54 ramps, and will be further restricted, if not largely eliminated, by the ramps.
- As shown in Plate 7 (KOP #3) for the No Project Alternative (#1) the existing view contains only a narrow sliver of the bay. The SDGE power lines are the dominant element of the existing view. While it is true that the proposed development will eliminate the bay view from this KOP, almost any building on the site would block the view.
- Criterion 5 doesn't seem to have been taken into account in the EIR analysis. The proposed project will provide a very strong waterfront image and community focus. The location of the project would also provide a regional focus for the site.
- Z50** Page 3-29, Table 3-1
- A Table 3-1 Supplement is included on the following page. This table lists the heights of the major buildings within the project site. The left-hand columns contain the height and number of stories of the original project (as shown on Table 3-1 of the EIR); the right-hand columns list the height and number of stories of the revised project as shown on the Revised Plot Plan (Attachment D). The location of Apartment Buildings A - G and Towers H - K are shown on the page following the Supplemental Table.
- The bungalows associated with the Luxury Hotel will have a height of 24 feet. The residential (north) units will have a height of 24 feet rather than the 39 feet listed in the table.

Z48 See Response Z46.

Z49 To southbound travelers along I-5, the proposed project will be visible from approximately the 24th Street exit of National City. While the completion of SR 54 ramps will restrict visibility to the project for a short distance, the project will be highly visible along the majority of the two mile-long stretch of Interstate 5.

Z49 No response necessary.

Z50 See Response Z46. Since the project will eliminate many of the existing public views to the bayfront, it is impossible to state that the project will promote a strong waterfront image for the City of Chula Vista.

Z51 Comment noted. See Volume I, Section 4.0 of the DEIR for the evaluation of the new Alternative 8, visual/aesthetic impacts.

TABLE 3-1
SUPPLEMENT
BUILDING HEIGHT ASSUMPTIONS
FOR SELECTED PROJECT FACILITIES

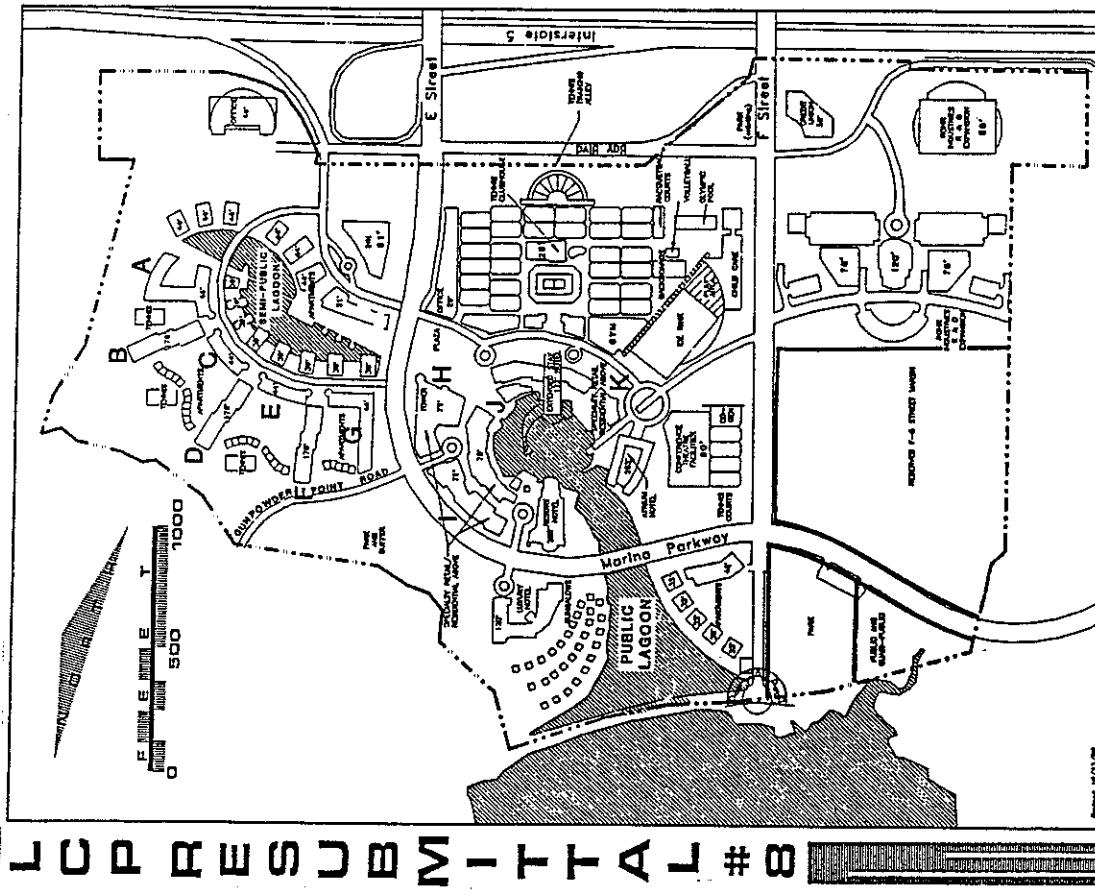
| <u>Building</u> | <u>Original Height</u> | <u>Project Stories</u> | <u>Revised Height</u> | <u>Project Stories</u> |
|---------------------|------------------------|------------------------|-----------------------|------------------------|
| Resort Hotel | 265 | 26 | 176' | 17 |
| Luxury Hotel | 120 | 8 | 69' | 5 |
| Atrium Hotel | 265 | 26 | 229' | 22 |
| Extended Stay Hotel | 172 | 17 | 172' | 17 |
| Residential (north) | | | | |
| Apt. Bldg. A | 44' | 3 | 53' | 4 |
| Apt. Bldg. B | 176' | 17 | 106' | 9 |
| Apt. Bldg. C | 44' | 3 | 53' | 4 |
| Apt. Bldg. D | 176' | 17 | 141' | 13 |
| Apt. Bldg. E | 44' | 3 | 53' | 4 |
| Apt. Bldg. F | 176' | 17 | 176' | 17 |
| Apt. Bldg. G | 44' | 3 | 53' | 4 |
| Residential/Com'l. | | | | |
| Tower H | 71' | 5* | 71' | 5* |
| Tower I | 71' | 5* | 71' | 5* |
| Tower J | 75' | 4** | 75' | 5** |
| Tower K | 75' | 4** | 60' | 4*** |

Source: The Jerde Partnership, Inc.

Notes: * 1 story retail/4 stories residential
 ** 2 story retail/3 stories residential
 *** 1 story retail/3 stories residential

Figure 2-IV

PROPOSED ENVIRONMENTAL PLAN



Page 3-29, Last Paragraph

- Z52** The evaluation criteria for potentially adverse effects on the public views refers to the extent to which the development would be compatible with the sites' shoreline location and the City's urban form and community character. The criteria also includes a consideration for the degree to which the proposed project would provide a visual and/or design link between the project and the City, as a whole, thereby facilitating the visual image of the City as a waterfront community.
- Obviously, the criteria require a subjective judgement to be made about the City's urban form and character as well as what constitutes a visual and/or design link between the City, the site and the bay. In short, what constitutes a "waterfront community"?
- The evaluation in the EIR text suggests that the existing low-rise (i.e., 1 to 3 story) form of Chula Vista should be extended westward to the shoreline with few if any, mid-rise (6 to 12 story) structures. Does this create a desirable "waterfront community" while a project with a high-rise element create an undesirable "waterfront community"? Further, how much of Chula Vista is, in fact, a waterfront community? The only portion of the City that can justifiably considered part of the waterfront would be that portion near the bay, perhaps the area west of Broadway.

Consequently, the analysis presented in the EIR has an unduly restricted perception of a desirable "waterfront community". Rather than analyzing the project and alternatives on the basis of extending a low-rise design feature to the shoreline the analysis should focus on visual and/or design links between the City, the site and the bay. Simply a continuation of low-rise development to the shoreline does not provide a visual and/or design link.

Page 3-33, First Paragraph

- Z54** This section of the EIR refers to the proposed project at KOP #2 and the last sentence of the paragraph reads,

"As such, impacts to urban form at the KOP are considered to be adverse but not significant."

However, the summary matrix (pg. 2 of 8) contains an "X" indicating the proposed project is significant and not mitigable. The summary should be revised to correspond with the text of the EIR. Similarly, the summary matrix for Alternatives 3, 4 and 5 should also be corrected.

- Z52** A waterfront community can be defined as any incorporated town or city that is located contiguous to a major natural body of water such as an ocean, bay, lake or river. By virtue of its location adjacent to a natural, and potentially scenic feature, a waterfront community possesses the potential for providing its citizens both public enjoyment of the resource, as well as the enhancement of community character through the provision of scenic views to the water feature.

Z53 Building heights, alone, do not create a desirable "waterfront community". The creation of a desirable waterfront community requires attention to a number of factors including: the diversity of uses and their compatibility with the surrounding community and community needs; public access to the waterfront and recreational opportunities for public enjoyment; and visual/design links between the waterfront development and the rest of the community. Visual/design links need to consider building designs, building scale and mass, and the degree of public waterfront views maintained by the project, as well as landscaping, signage and other access links.

Z54 Comment noted. Summary matrix has been corrected.

Page 3-34, Fourth Paragraph

Z55 The paragraph states that,

"The visual impacts from KOP #3 are considered to be significant since almost all bay views will be eliminated, and the project will visually dominate from the existing commercial/resort establishments."

As in the previous comment, the EIR text does not indicate a significant impact to urban form and image, yet the summary matrix (pg. 2 of 8) indicates a significant and not mitigable impact. The matrix should be revised to reflect the text on page 3-34.

Additionally, the identified impact to bay views from KOP #3 considers only a view to the northeast (see Plate 7). An evaluation of the view from this point that considers the southeasterly view as well as the northeasterly view would show that only a portion of the bay view is obscured. Consequently, the evaluation should be considered adverse, but not significant.

Page 3-45, Mitigation Measures

Z56 Measure #2 states that development on the west and north section of the site should be limited. This is contrary to the General Plan which calls for housing, retail and office uses in this area (see Figure 10-1, General Plan).

Measure #3 states,

"Graduate building heights of development in the south-central area of the site in order to create a view angle which focuses on the shoreline".

Z57 The graduation of building heights may not be beneficial to the project as a whole, especially since it is suggested in order to create a view angle which would only be beneficial in reducing predator perch sites. The revised project does provide a graduation of building heights for the three major high rise apartment buildings on the north (9, 13 and 17 stories) near the National Wildlife Refuge.

Measure #4 states,

"Allow views to the Chula Vista bayfront in order to ensure visual compatibility with Chula Vista's waterfront and provide architectural interest on the site. Preserve view corridors along 'E' Street through building siting and setbacks. In general, building setbacks from local public roads should be equal to, or greater than, the building height. Restrict building heights in the northern section to be lower than the height of freeway

Z55 Impacts to urban form and image are considered to be significant from KOP No. 3 since "...the proposed project will create a high density urban form...and the project will visually dominate from the existing commercial/resort establishment..." (Volume II, pg. 3-31).

Z56 Comment noted. Mitigation measure No. 2 does not state there should be no development in the northern or western parts of the site.

Z57 No response necessary.

Z58 No response necessary.

Landscaping and overpasses to keep views of the Chula Vista bayfront open."

A relatively dense, urban project is not incompatible with Chula Vista's waterfront nor to its image as a water-related community. In urban areas the general rule regarding building setbacks does not necessarily apply to this site. Restricting building heights to lower than the height of freeway landscaping is not based on any empirical or realistic assessment of the physical situation. Very little of the site can be seen from the freeway now due to the roadway being below the grade of the site. It should be noted that the approved LCP contains a project which is not only dense, but is monotonous in its appearance. This is in contrast to the proposed project which provides an attractive variety of building heights and mass.

Plate 1

Z59 The bungalow heights shown on Plate 1 (KOP #1) for the proposed project are incorrectly listed at 16 feet. The correct height is 24 feet as shown on Figure 2-V (Proposed Land Use Designations).

Plates 1 through 20

Z60 Plates 1 through 20 of the EIR presents visual views of the site with the structures of the proposed project and alternatives structures superimposed on the existing views. A scale model of the proposed project has been constructed as shown in Photographs 1 and 2 on the following pages. Views of the model were photographed from vantage points that correspond to the EIR Key Observation Points (KOP) as closely as possible. The correspondence between the photographs and KOPs are:

| <u>Photograph</u> | <u>KOP</u> | <u>Plate</u> | <u>Location</u> |
|-------------------|------------|--------------|--|
| 3 | | 1 | Looking east from Nature Interpretive Center |
| 4 | 4 | | Looking northwest from "P" Street |
| 5 | 7 | | Looking west from Bay Boulevard |
| 6 | 10 | | Looking west from "F" Street east of I-5 |
| 7 | 12 | | Looking west from "E" Street at I-5 ramps |
| 8 | 15 | | Looking southwest from I-5 near SR 54 ramps |
| 9 | 17 | | Elevated roof top view from Extended Stay Resort |
| 10 | 19 | | Looking north from Marina Parkway |

These photographs give more visual definition to the project than is presented in the EIR, with the exception of Plate 1. The angle

Figure 2-V does not indicate proposed heights for the Bungalows. The 16-foot height assumption for the one-story bungalows was provided by the Jerde Partnership.

Plate 1 was prepared to show the intended visual character of the project by the applicant. However, it is important to point out that, at the plan level of CEQA compliance, the applicant is not committing to the specific design and landscaping depicted in the model shown on Plate 1 of the DEIR. Aesthetic/visual issues being addressed at the plan level are building height, mass and scale, and view obstructions. It is also important to note that while the model may be to scale, photographs of the model do not represent actual views or building scales as perceived from the various KOPs.

of view in the following photographs and the EIR plates is close enough to immediately recognize the comparison.

Z61 The relationship between the existing power lines and project buildings is clearly seen in the following photographs. A major improvement of the photographs over the EIR Plates is that the buildings are shown with their intended articulation rather than as box-like structures as shown in the EIR. The photographs also illustrate how landscaping softens the visual appearance of the project.

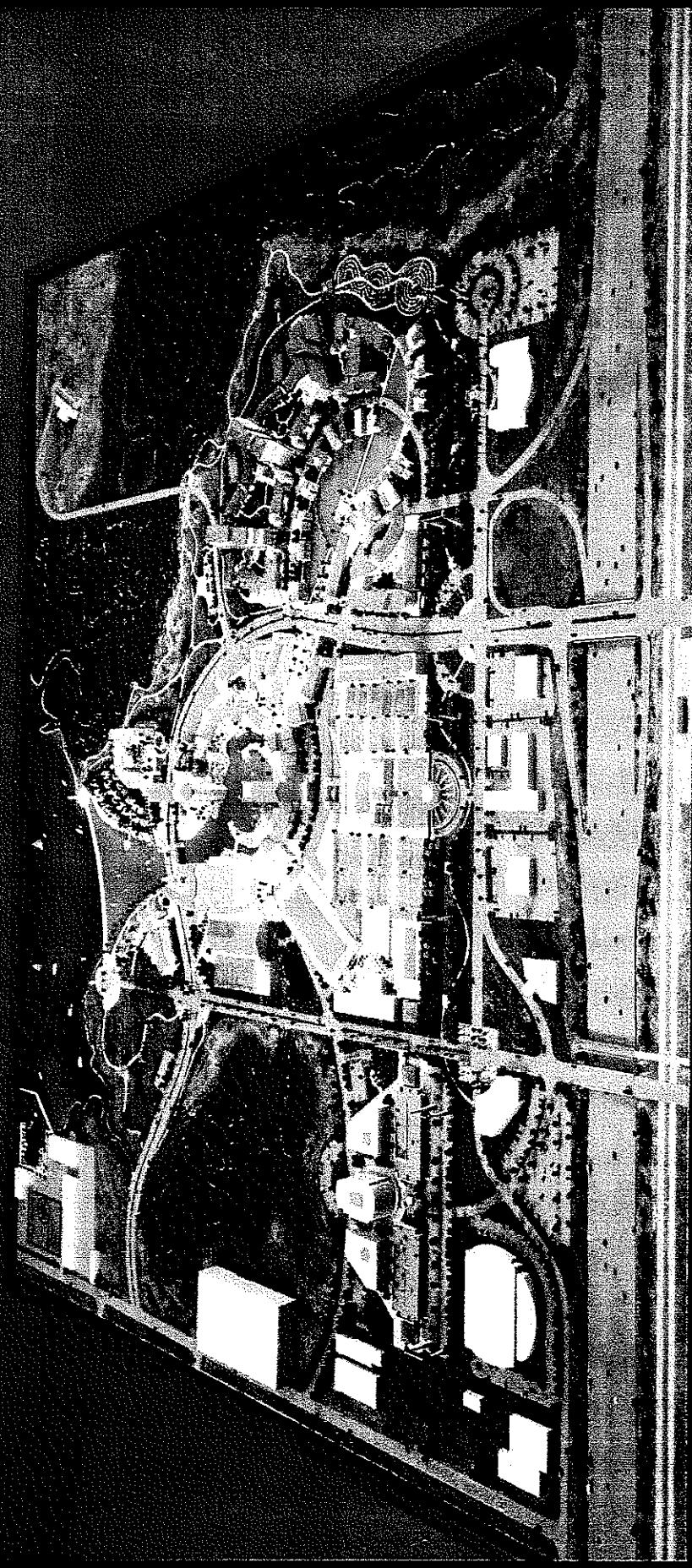
Z62 Finally, it should be noted that project changes, dated Sept. 26, 1990, reduce the heights of the two most northern residential towers from 17 to 9 and 13 stories respectively; reduces the height of the luxury hotel from 8 stories to 5 stories and eliminates all private development at the foot of F Street. Height reductions in the photographs are shown by a line on the buildings.

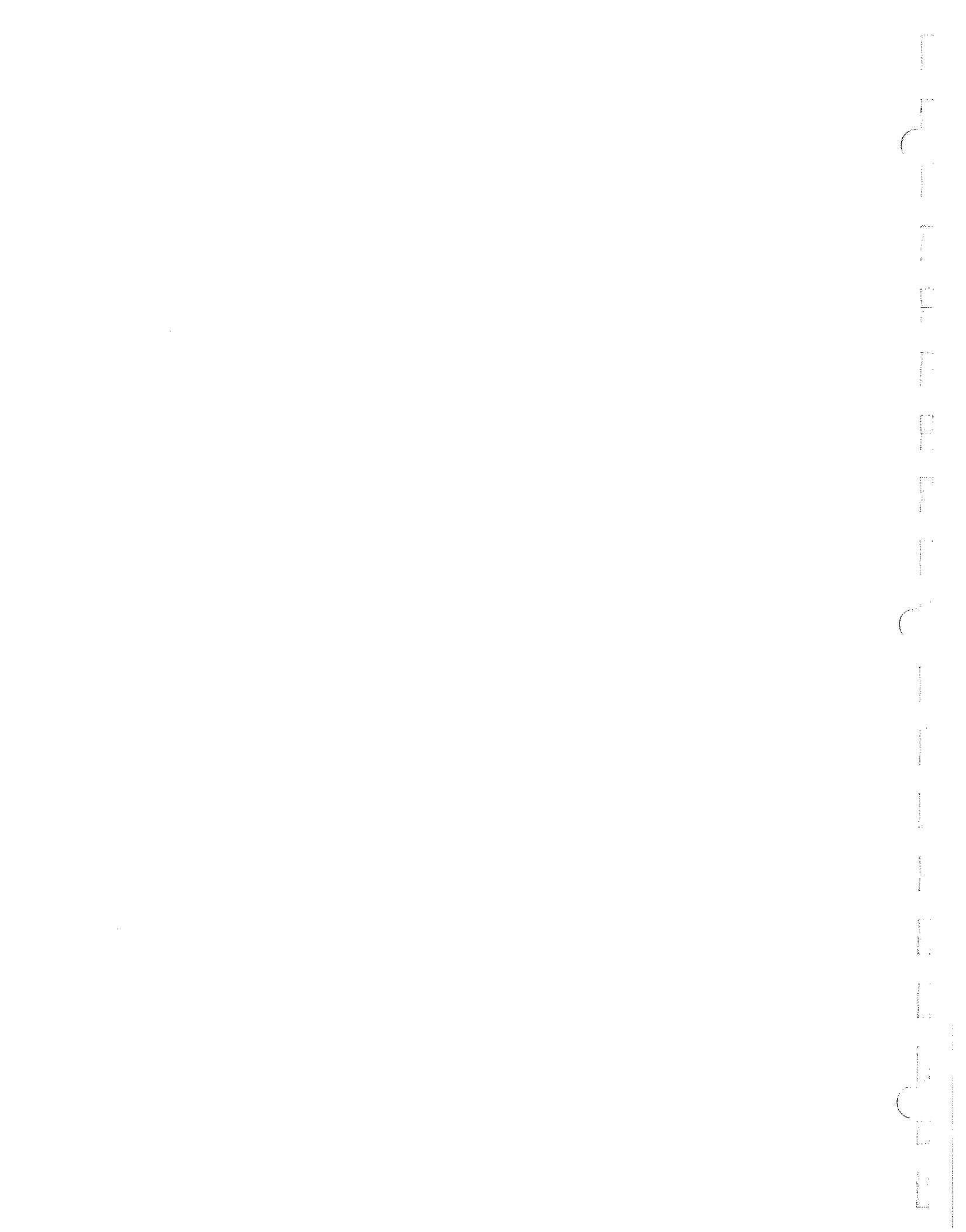
of view in the following photographs and the EIR plates is close enough to immediately recognize the comparison. See Response Z60.

Z61 No response necessary.

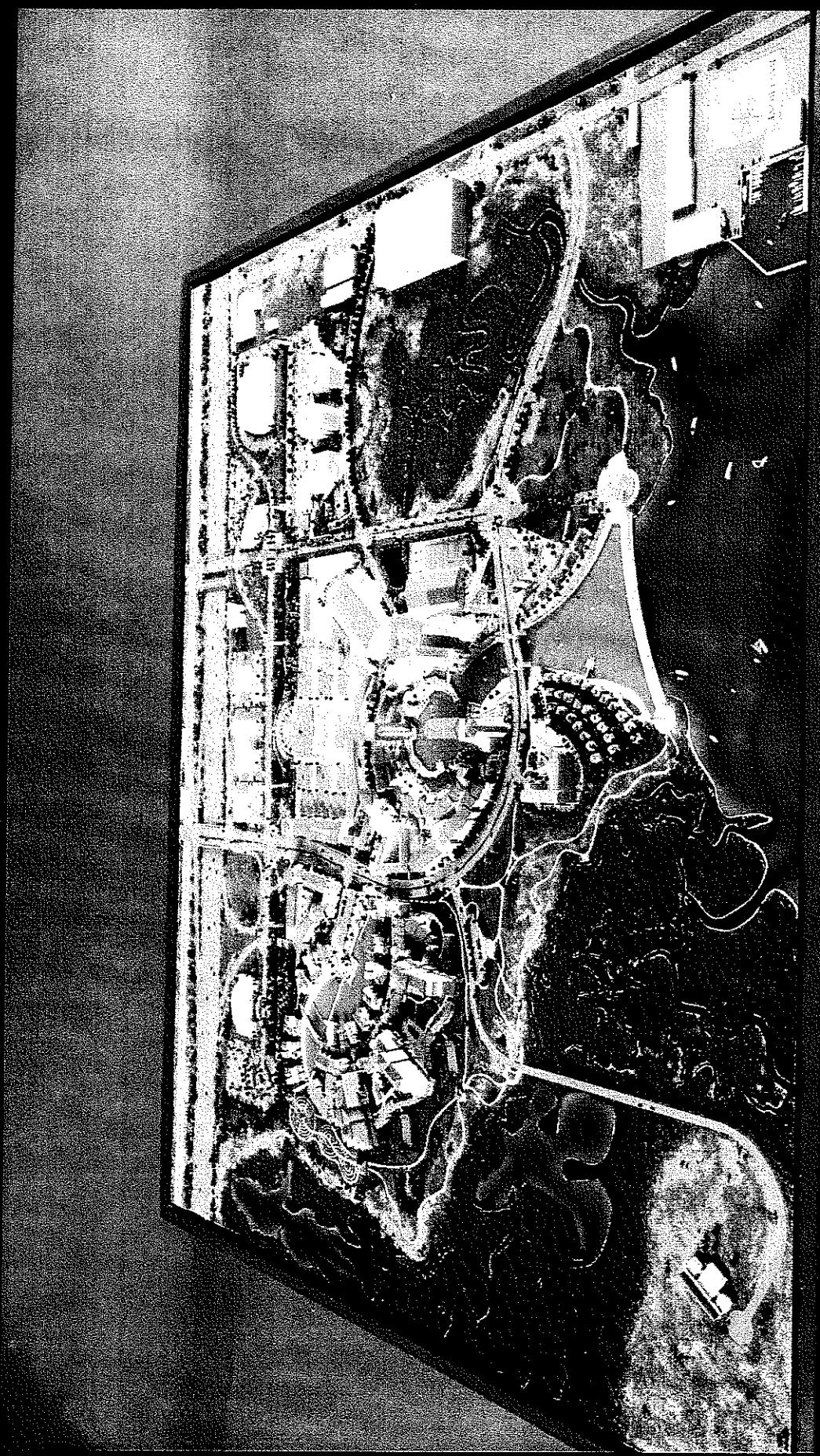
Z62 No response necessary.

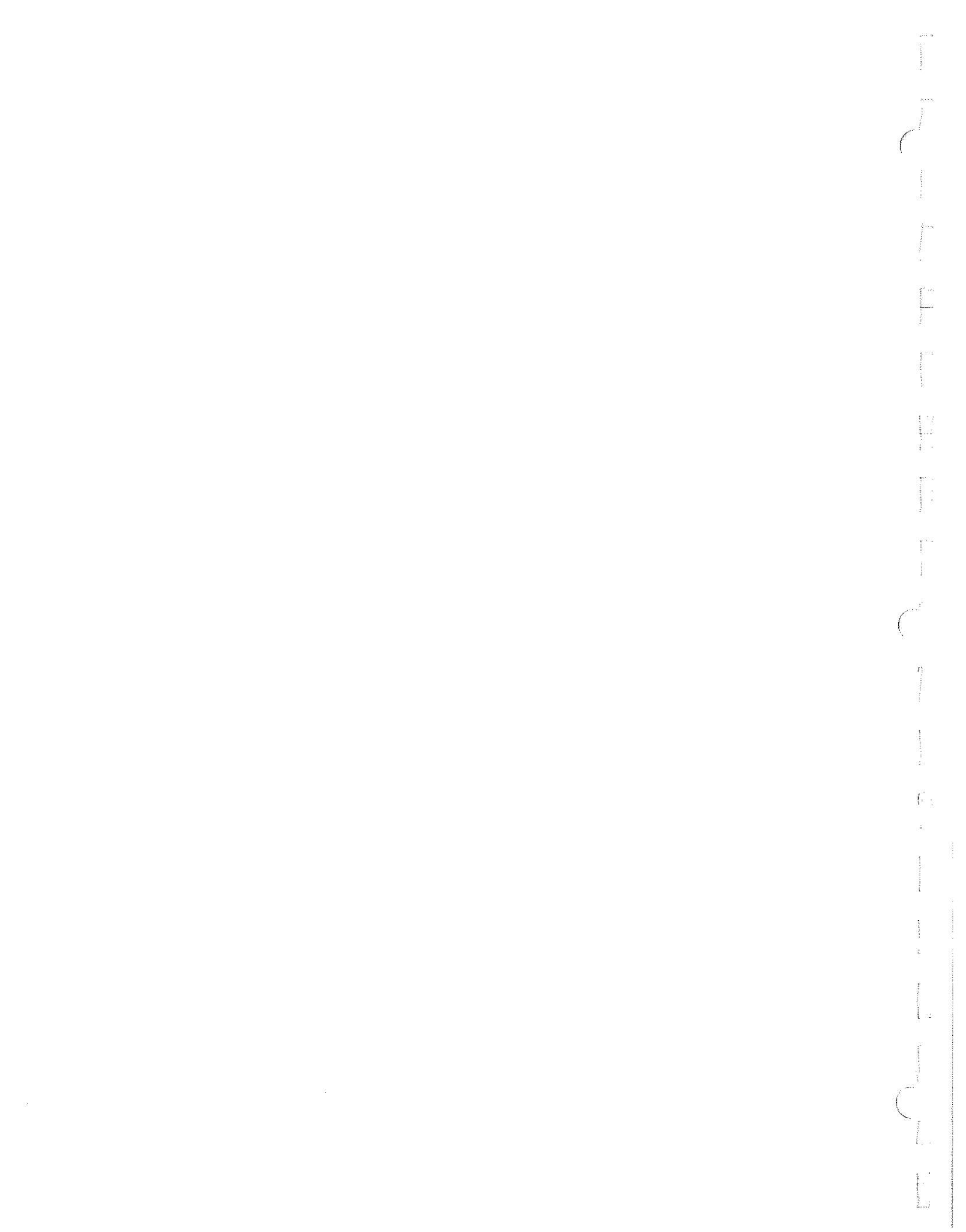
PHOTOGRAPH 1





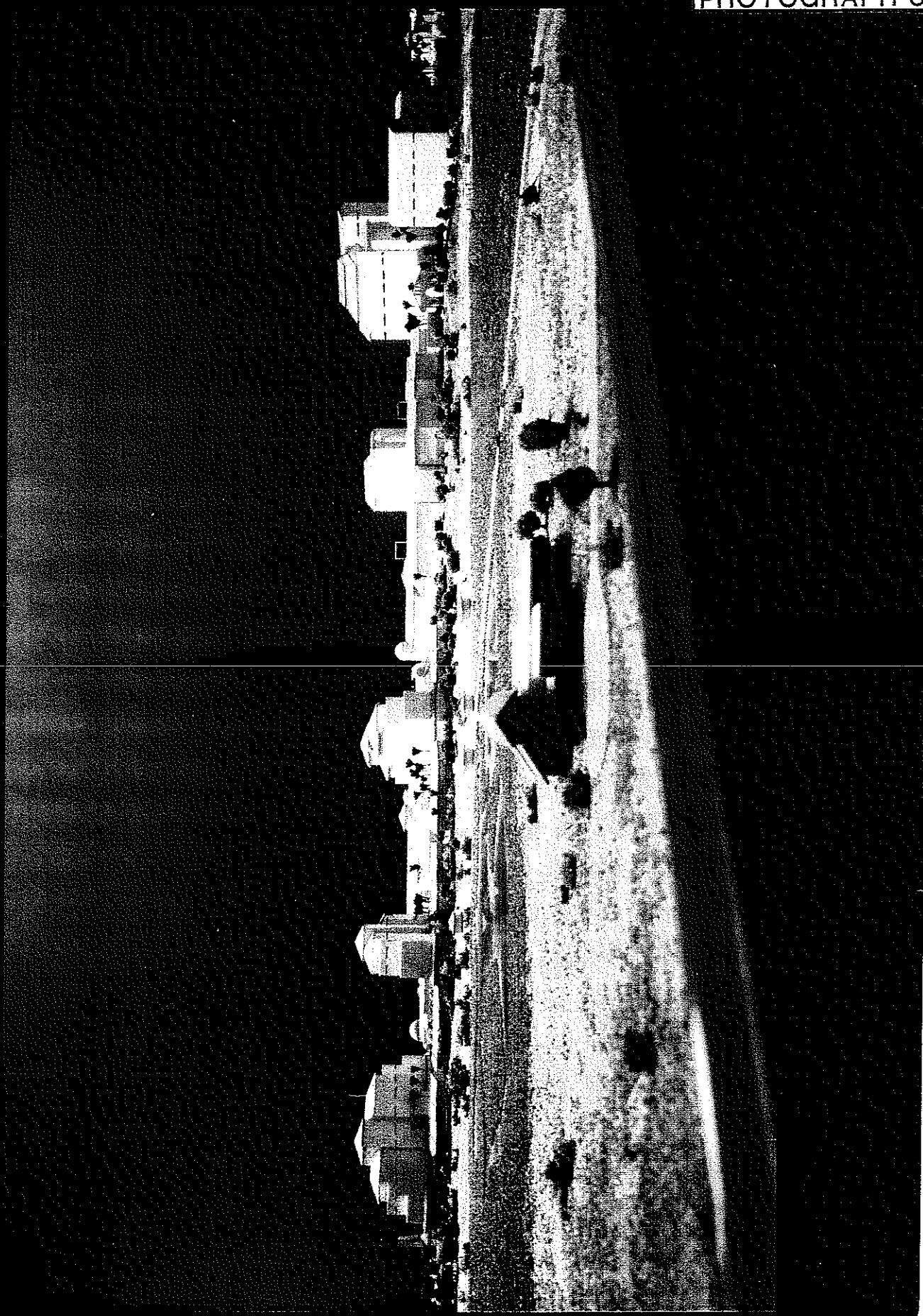
PHOTOGRAPH 2

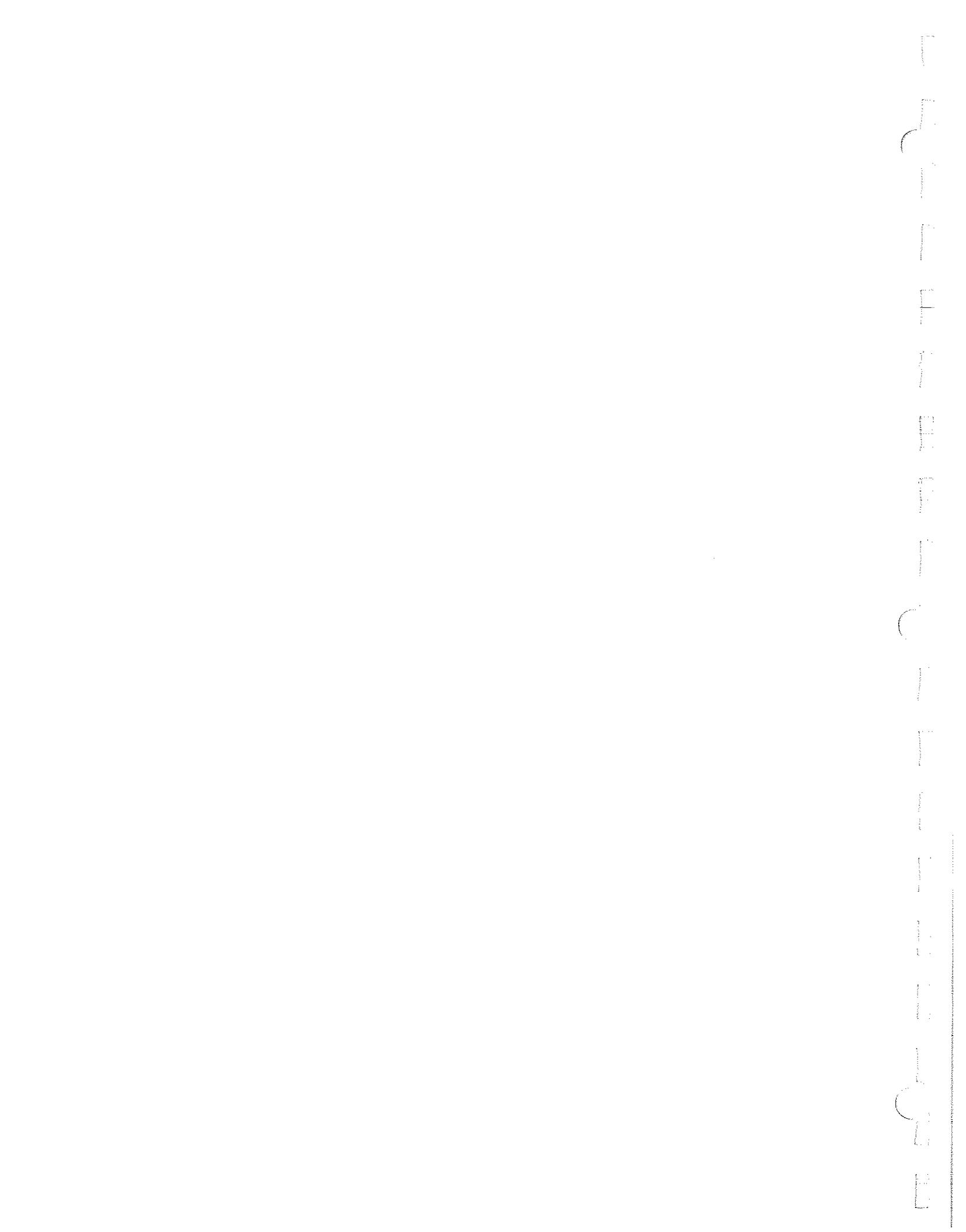




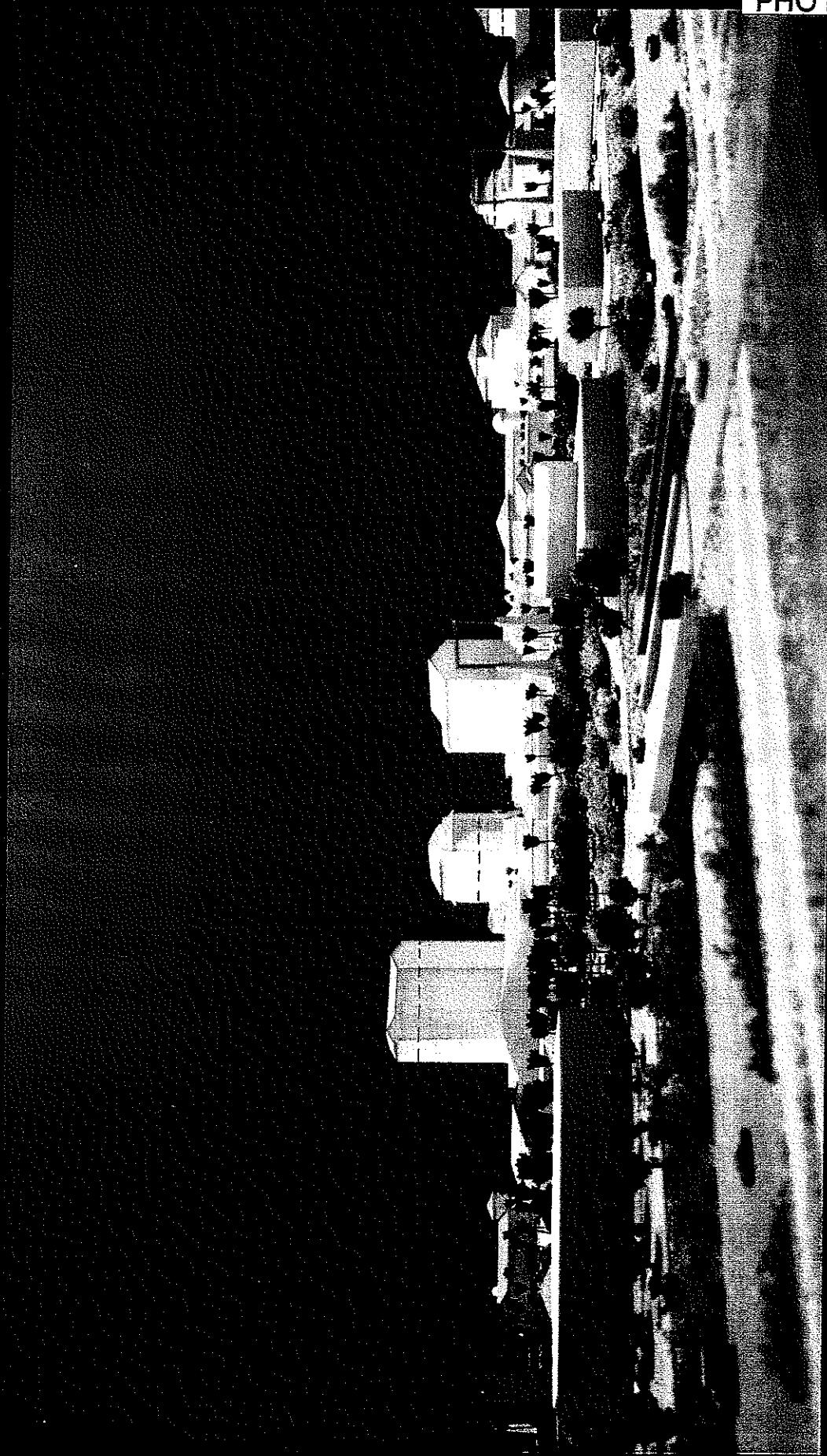
The red dashed line inked on the buildings in the following photographs represent the reduced building heights of the Revised Project dated Sept. 26, 1990.

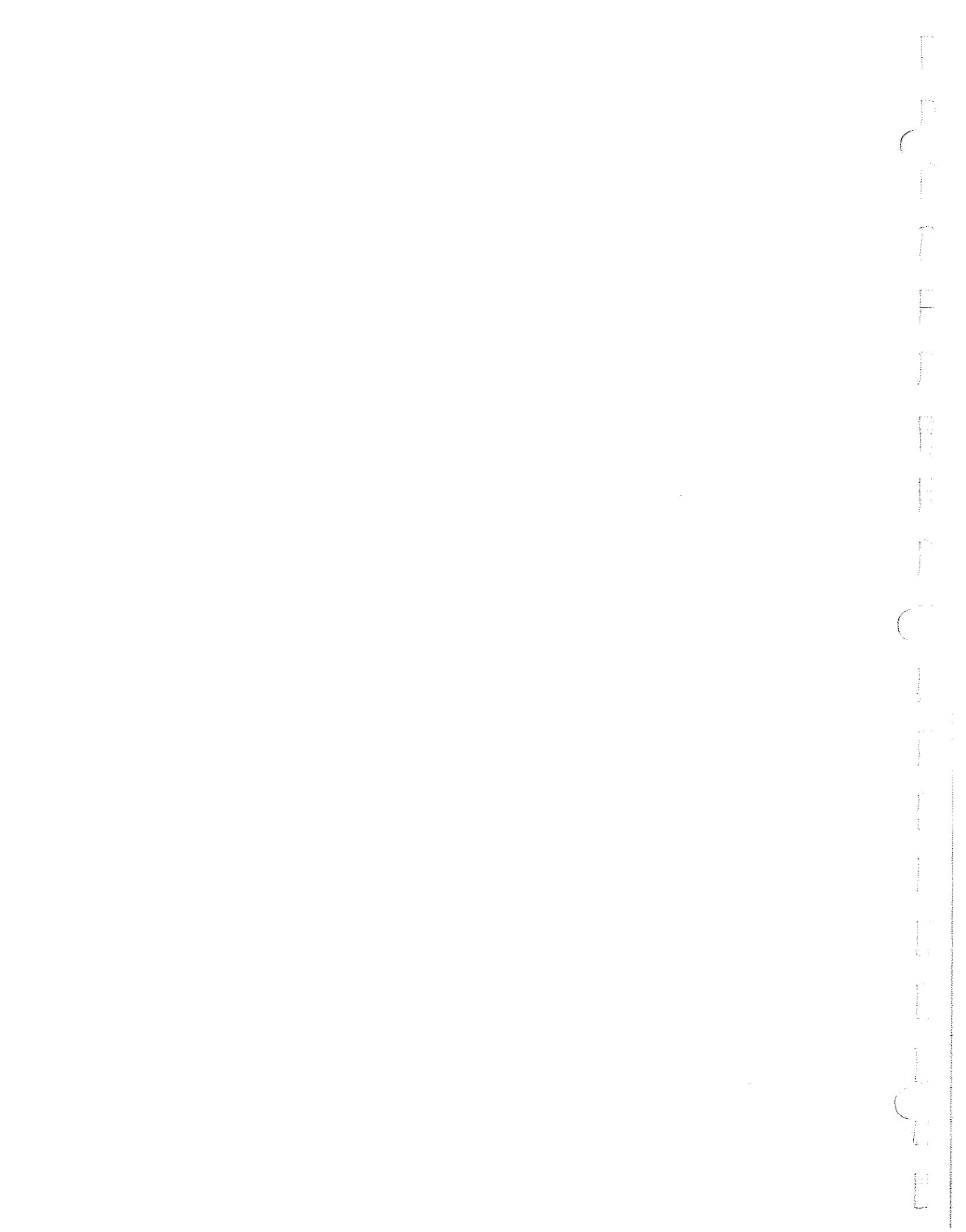
PHOTOGRAPH 3



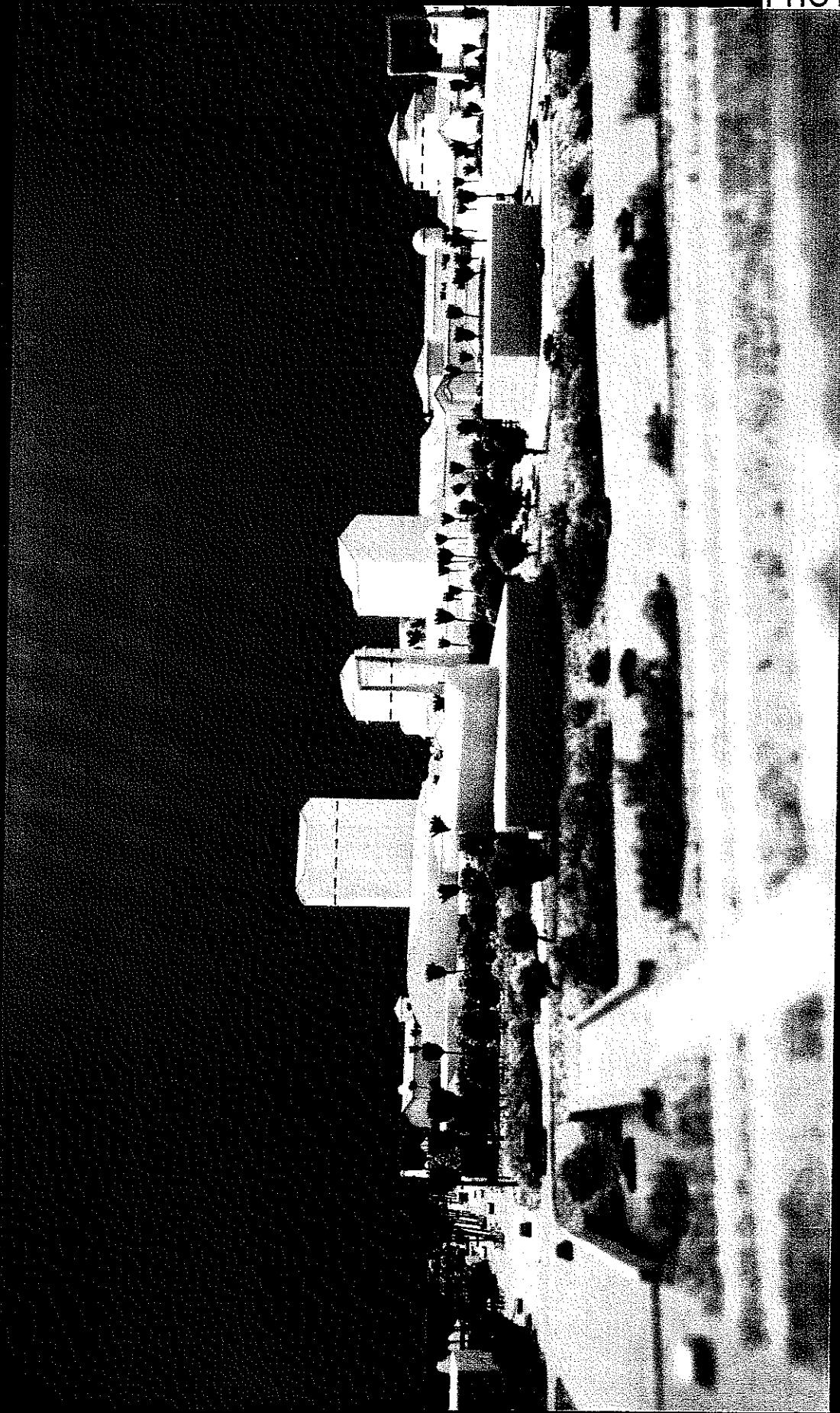


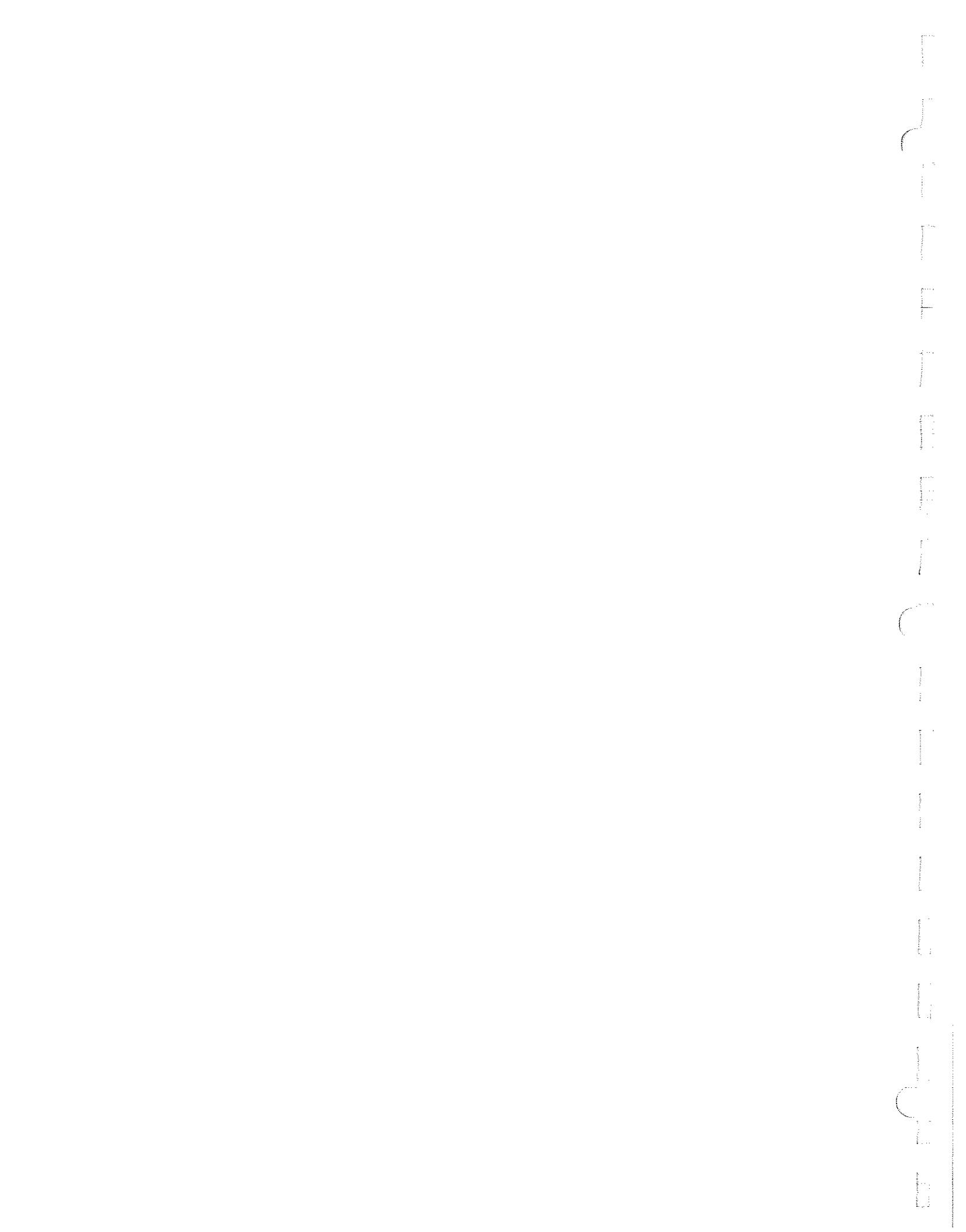
PHOTOGRAPH 4



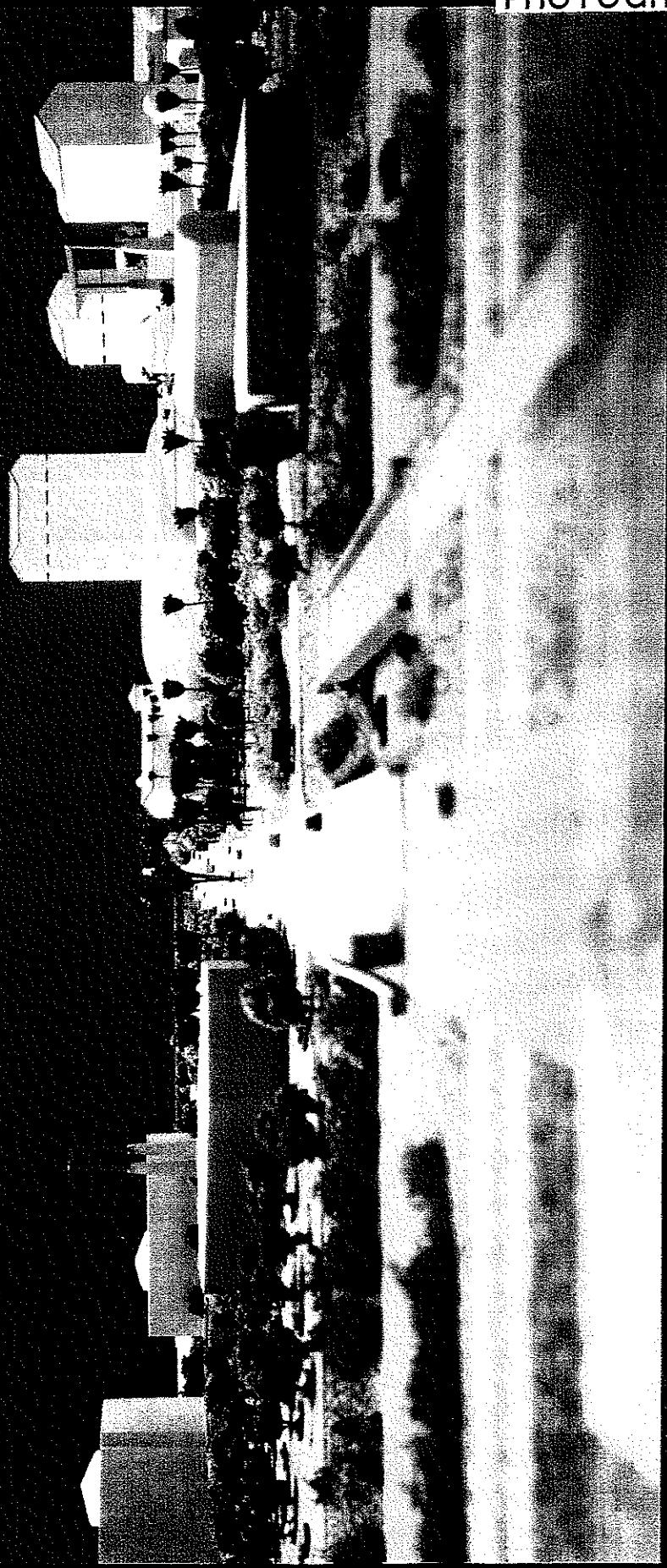


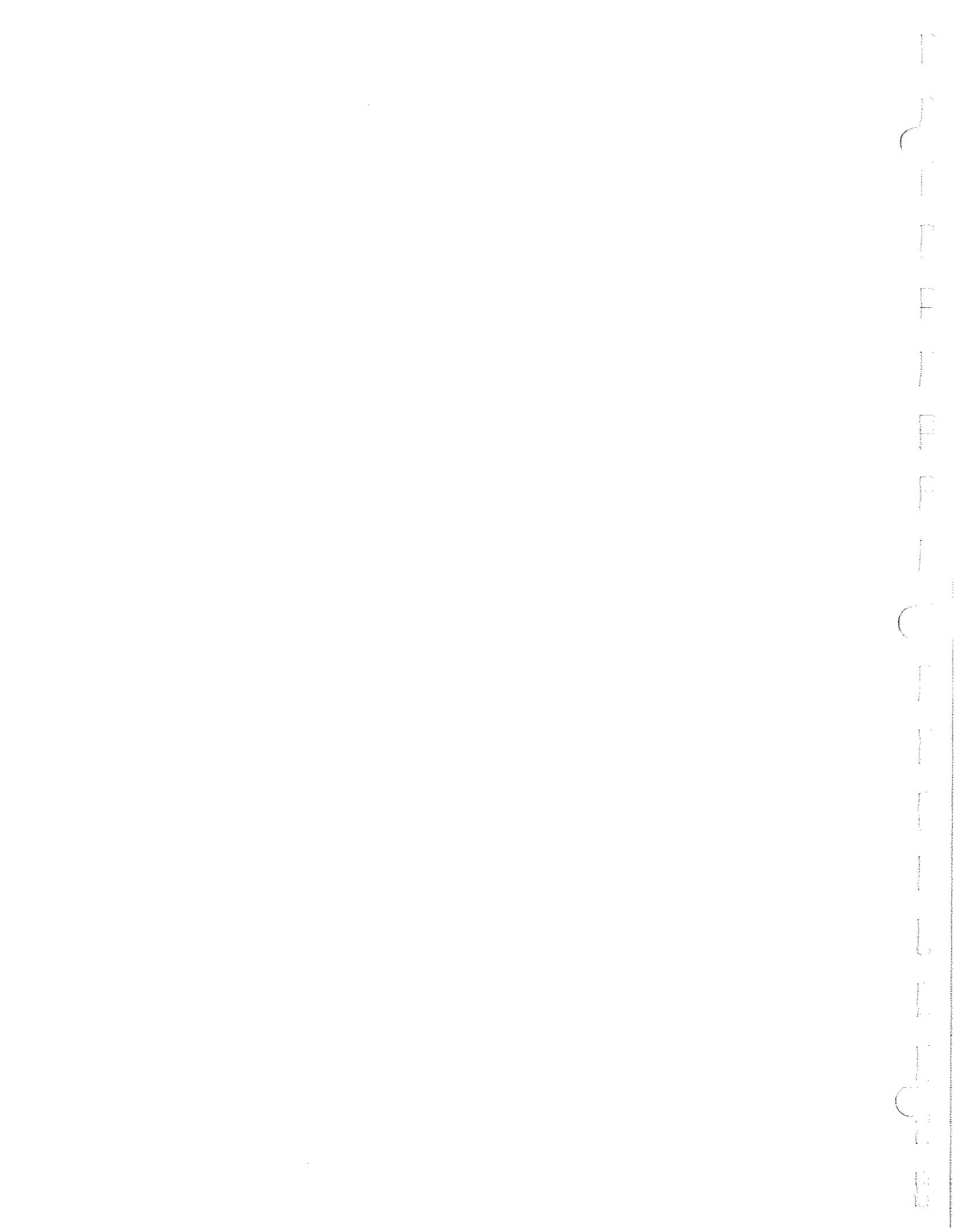
PHOTOGRAPH 5



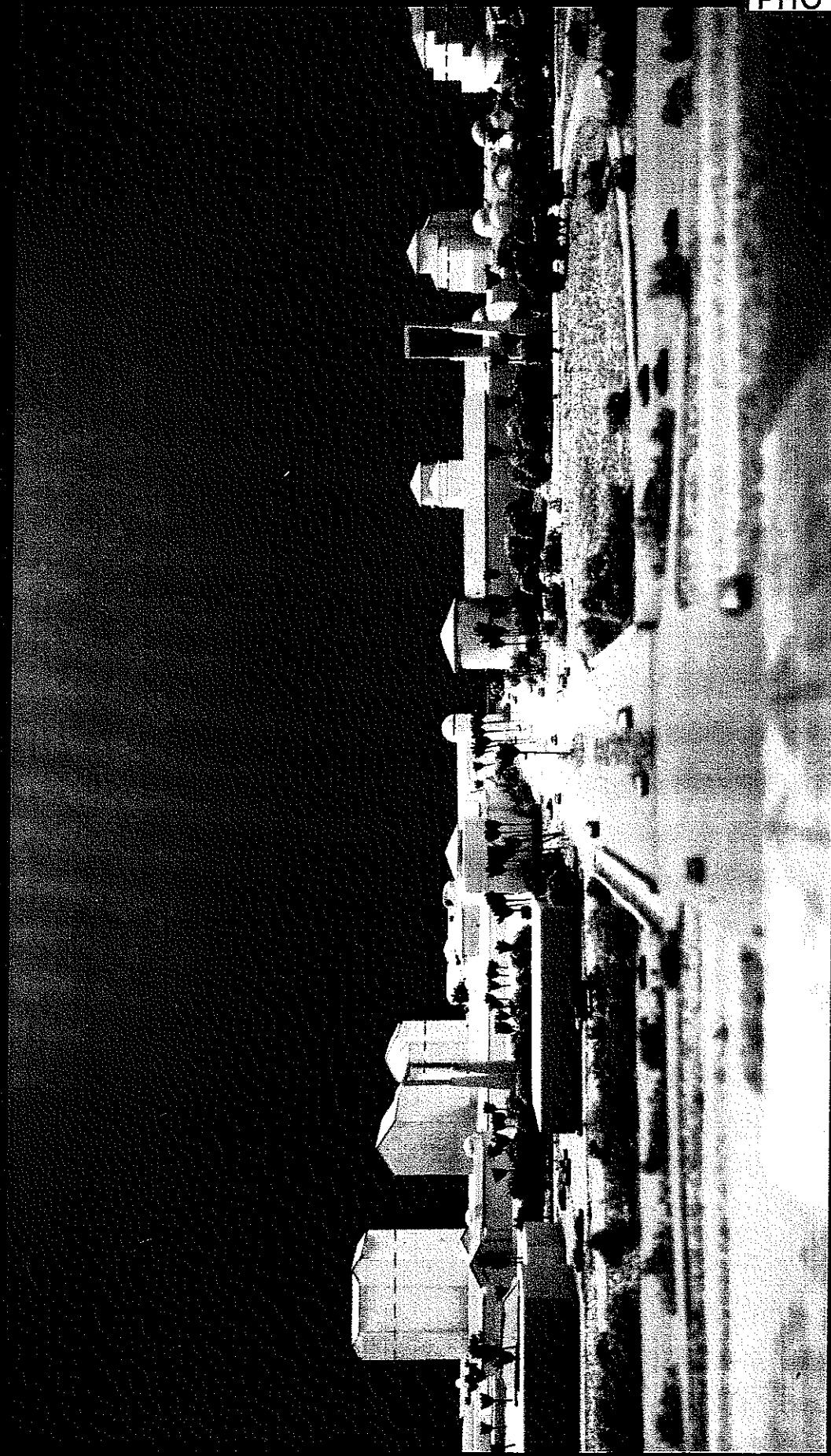


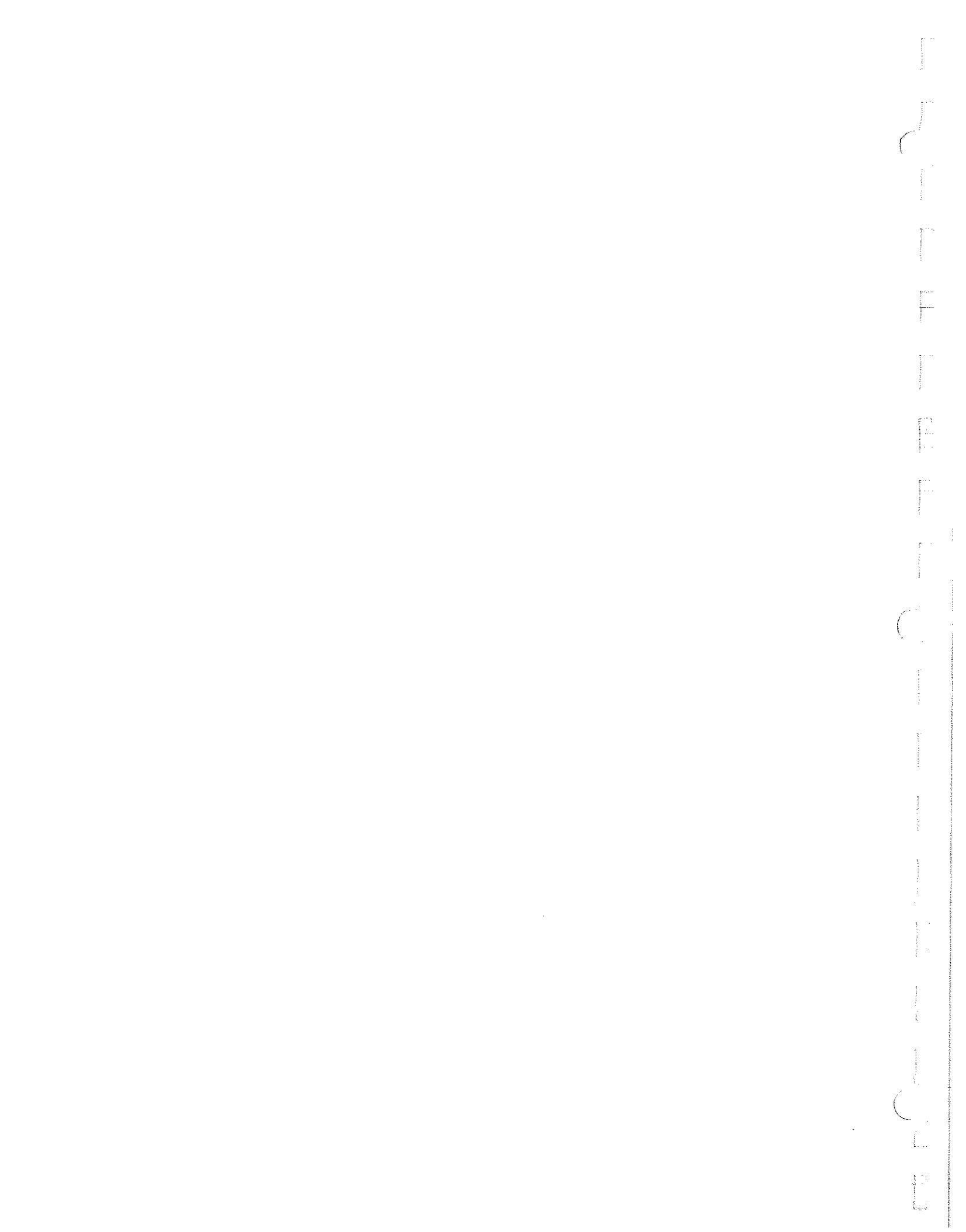
PHOTOGRAPH 6





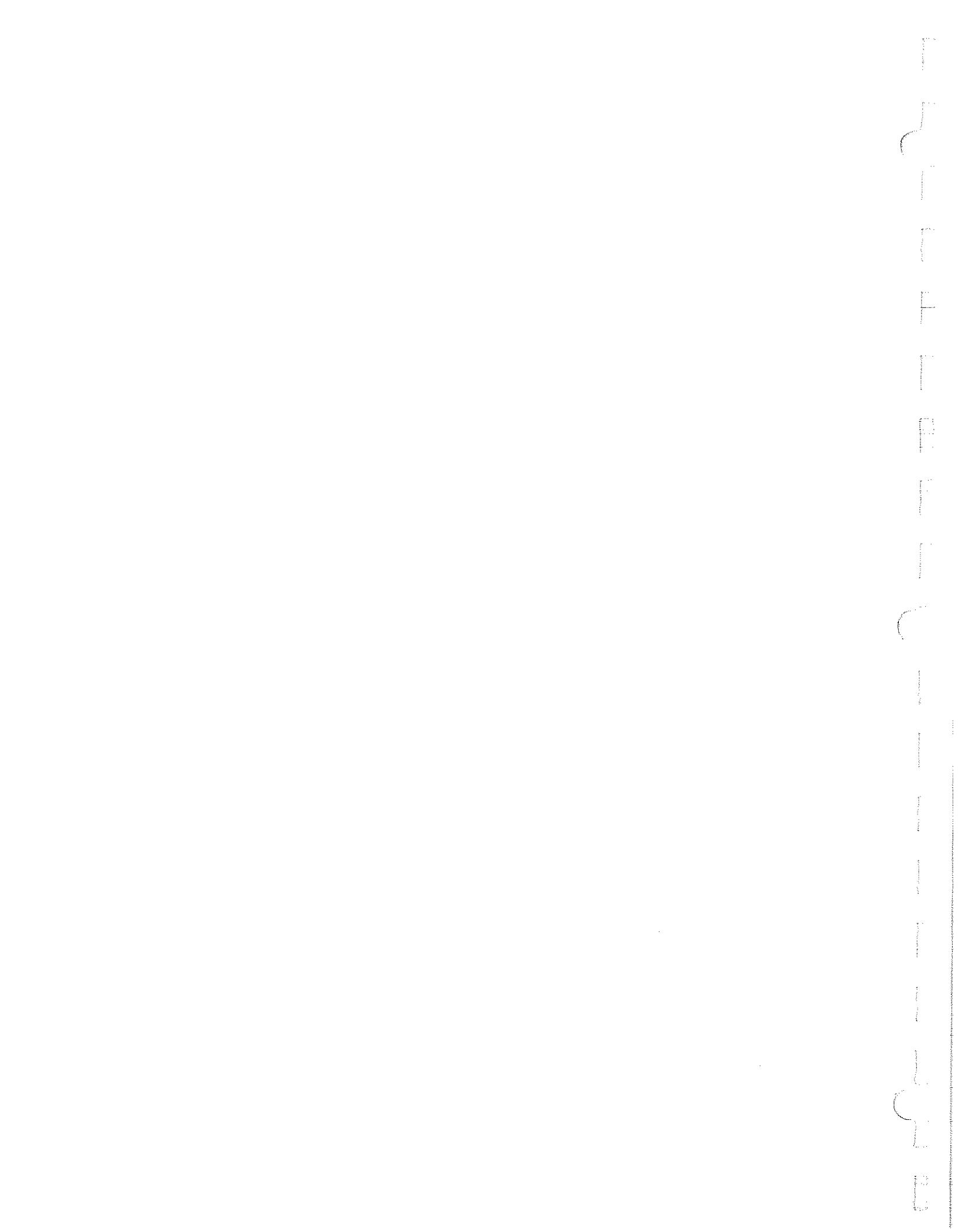
PHOTOGRAPH 7





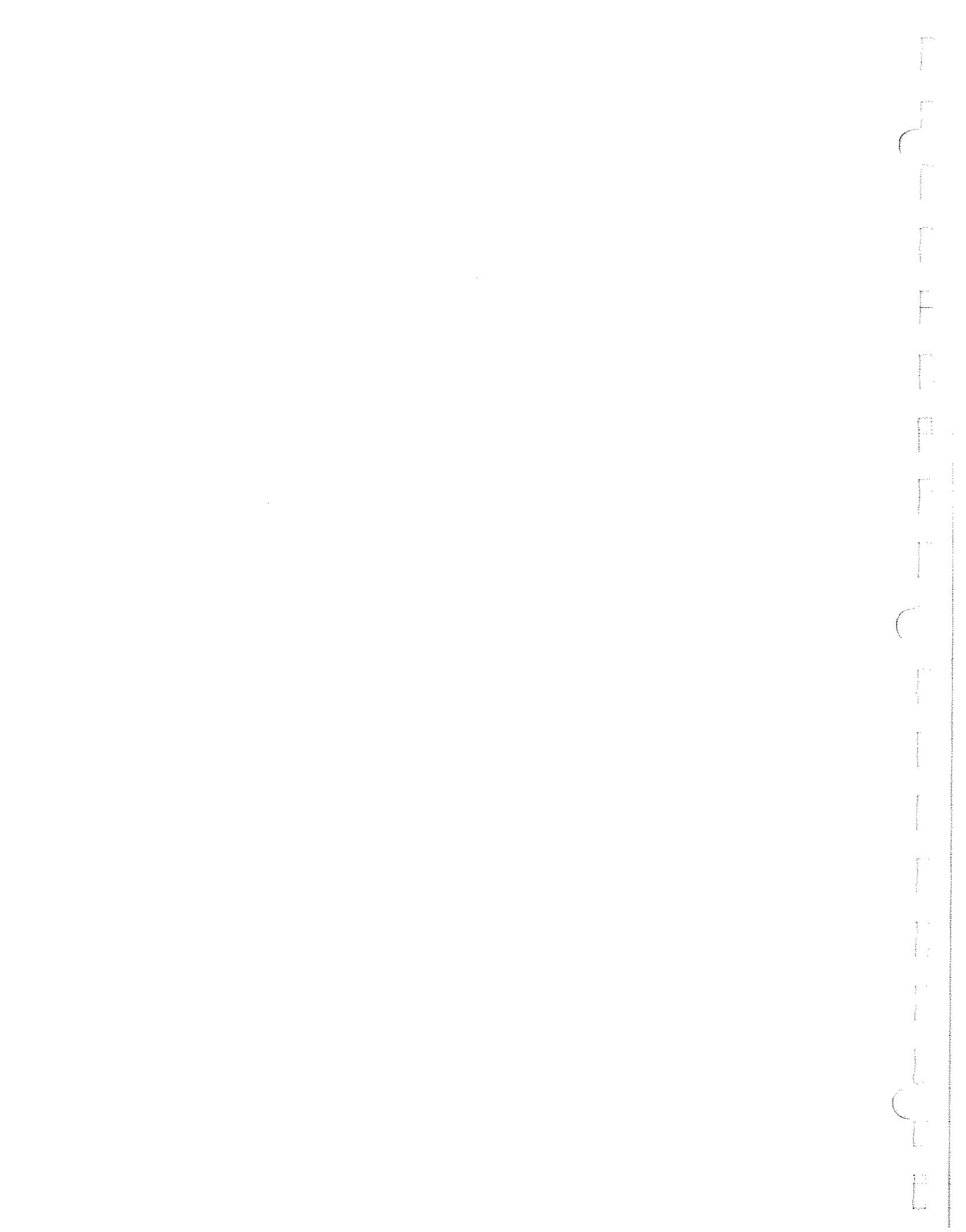
PHOTOGRAPH 8





PHOTOGRAPH 9





PHOTOGRAPH 10



- Z67 (c) Restore and enhance about six acres of degraded wetland in the F/G Street Salt Marsh including at least:
- (1) 1.7 acres of Low salt marsh;
 - (2) 0.5 acres of high marsh; and
 - (3) 3.5 acres of fresh water marsh;
- (d) Fence and screen the F/G Street marsh with coastal sage scrub totaling at least 2.0 acres;
- (e) Restore additional acreage at Gunpowder Point and/or D-Street Fill at locations to be agreed upon with USFWS, other resource agencies, and the City of Chula Vista.
- (f) Establish a comprehensive Habitat Restoration and Management Program (described below) which will include a:
- (1) Predator Management Program; and
 - (2) Mitigation Monitoring Program.
- (g) Prevention of surface runoff from developed areas from entering the E-Street/Vener Pond/Sweetwater Marsh area of the Refuge;
- (h) Construction, operation and maintenance of a 1.3 acre desilting basin (with a capacity of 9.5 acre feet) and a gate/valve structure to control delivery of water to the new Freshwater marsh (see c) above).
- (i) Installation of triple chamber traps for oil/grease and sediment at appropriate locations in the project's storm water drainage system, including:
- (1) Two or three storm drain outlets that discharge to the Bay; and
 - (2) at locations prior to discharge into the desilting basin
- (j) Rigorously adhered to maintenance program (see Item 4 following) that will include:
- (1) A street sweeping program to remove particulates, etc.;
 - (2) Maintenance of oil/grease and sediment traps, boundary fences, etc.; and
 - (3) control of garbage and trash storage and removal;
- (k) Implementation of a series of City-prescribed measures to control storm water runoff and sedimentation during the construction phases of the project; and
- (l) Establishment (installation) of a 100-foot wide primary zone (locally up to 600 feet wide) adjoining the Refuge boundary in the E-Street Marsh/Vener Pond/Sweetwater Marsh area of the National Wildlife Refuge. This zone will incorporate maximum use of Coastal Sage Scrub

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| | | | Z68 | Comment noted. |
| | | | Z69 | Comment noted. See Response Z6. |
| Z68 | (m) | In addition, the CVI Revised Project (dated 9/26/90) includes an additional 3.7 acres of parkland located at the foot of "F" Street, and an additional 0.6 acres of buffer park west of Marina Parkway and north of the foot of "F" Street./ The additional open space acreage is a further environmental benefit. | | |
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| | | 4. CVI HABITAT RESTORATION AND MANAGEMENT PROGRAM | | |
| Z69 | | As set forth in the Environmental Management section of LCPR No. 8 (see Page II-107, 108), CVI commits to the development of a comprehensive Habitat Restoration and Management Plan (HRMP) in cooperation with the USFWS, California Department of Fish & Game, the City of Chula Vista, and other resource agencies as appropriate. This HRMP will constitute a contractual document between CVI and USFWS; this contract will ensure the orderly and efficient implementation of the various restoration and monitoring commitments made by CVI in connection with approval of the project. | | |
| | | In addition, this HRMP will be incorporated in the Development Agreement to be executed between CVI and the City of Chula Vista, thus making the City a party to the contractual provisions. | | |
| | | The Habitat Restoration and Management Plan addresses in detail both the implementation of the specified restoration and enhancement actions and the long term management of the areas restored or enhanced. The HRMP includes the following elements: | | |
| | | | (a) | Engineering design, grading plan, and cost analysis; |
| | | | (b) | Vegetation design, including specifications for planting program, source of plants, etc.; |
| | | | (c) | Implementation schedule, phasing and management plan; |
| | | | (d) | Predator Management program; |
| | | | (e) | Monitoring program; |
| | | | (f) | Maintenance program; |
| | | | (g) | Documentation of funding arrangements for implementation, monitoring, and maintenance; |
| | | | (h) | Contractual agreements; and |
| | | | (i) | Ownership transfer where appropriate. |
| | | | | Note that the HRMP's Monitoring Program will incorporate the various monitoring requirements set forth in the Corps of Engineers 404 Permit Special Conditions. Where appropriate, certain of the CEQA (AB 3180) Mitigation Monitoring Program requirements can be incorporated as well. |

Z70 5. Comparison with Impact Analysis results presented in the 1985 and 1986 Final EIR for the Chula Vista Bayfront Specific Plan.

The conclusions reached in the LCPR No.8 DEIR concerning the level of significance of impacts on biological resources were compared with the equivalent analysis and conclusions in: a) the Final Environmental Impact Report for the Bayfront Specific Plan (City of Chula Vista EIR 85-1) dated January 3, 1985; and b) the Final Supplemental Environmental Impact Report for Amendments to the Chula Vista Bayfront Specific Plan (City of Chula Vista EIR-86-1) dated September 9, 1986.

It is noteworthy that in the January, 1985 Final EIR, the lengthy discussion of Mitigation (Sect. 3.5.3, p. 46 through 53) concludes (p.53):

"In summary, all of the identified biological impacts of the Proposed Bayfront Specific Plan can be avoided or substantially lessened through the implementation of the wetland restoration, enhancement, buffering, and maintenance programs within the Land Use Plan and Specific Plan."

Further, the FEIR's Analysis of Significance (Sect. 3.5.4, p. 53 and 54) includes that statement:

"In implementing this approved Land Use Plan, the specific plan would provide wetland restoration and protection measures consistent with the Proposals of the LUP. These measures would avoid the direct impacts of wetlands destruction by a program of enhancement and replacement with reclaimed marsh areas. Other direct impacts related to development on Gunpowder Point -- reduction of the least tern nesting area, altered drainage characteristics, construction of roadways near clapper rail habitat -- and the indirect impacts of increased human activity would all be substantially reduced by the measures incorporated into the project."

The September, 1986 Final Supplemental EIR (see p.28) reconfirms the conclusions of the 1985 FEIR; the exact wording is:

"The mitigation measures presented in the FEIR (pp. 46-54) on the Specific Plan combined with those presented above reduce the potential impacts on biological resources to a less than-significant level."

Finally, it is also noteworthy that this Bayfront Specific Plan was approved by the California Coastal Commission in 1984. In approving the Land Use Plan, the Commission found that the plan was consistent with the Policy requirements of Section 30240 of the California Coastal Act pertaining to protection of environmentally

These comments are noted, and are not relevant to this DEIR. It should be noted that this project is substantially different from the previous project analyzed, that the assessment of biological impacts in this DEIR had the benefit of a greater data base compiled for the project area since 1985, and that the sensitivity of the project area has increased with the establishment of the Sweetwater Marsh National Wildlife Refuge. Thus, it is to be expected that the current analysis for this project would be quite different from that prepared for a different project five years ago.

Z70

sensitive habitat areas and development in areas adjacent to environmentally sensitive habitat areas.

In short, neither the 1985 nor the 1986 FEIR found significant unmitigable impacts on biological resources. This finding is in marked contrast to the interpretations and judgements re biological impacts presented in the LCPR No. 8 DEIR.

Z71 This contrast is of major significance in evaluating the objectivity of the LCPR No. 8 DEIR because the Land Use Plan addressed in the 1985 and 1986 FEIRs included:

- (a) a hotel of up to 12 stories located on a 14 acre parcel on Gunpowder Point;
- (b) two marinas located on the D-Street fill; and
- (c) two marina-related buildings (up to 5 stories) located near the marinas on the D-Street fill.

It is clear that because of their location, the hotel, marinas and marina-related buildings of the Bayfront Specific Plan would have had substantially more impact on biological resources than the LCPR No. 8 CVI Midbayfront project which would utilize only the more remotely located, degraded uplands portion of the former Bayfront Specific Plan. In addition, virtually all the mitigation measures offered as part of the 1985/86 Plan (or their equivalent) have been incorporated in the CVI project. Further, CVI has offered additional restoration of degraded wetlands and wildlife habitat on Gunpowder Point and the D-Street fill, as stated in a preceding comment.

Z72 In view of the marked difference in the judgements reached in the present DEIR and the judgements in the 1985/86 FEIRs re the level of significance and degree of mitigability for several equivalent types of biological impacts, the question arises as to the objectivity of the LCPR No. 8 DEIR analysis.

Z73 This question is particularly vexing because the 1985/86 Bayfront Specific Plan included major structures on Gunpowder Point and on the D-Street fill in much closer proximity to the wetlands of the Sweetwater Marsh complex and to the Least Tern nesting colony on the fill than any structure proposed in the CVI project. Yet it is the CVI project's anticipated biological impacts that are adjudged significant and unmitigable, even though the FEIRs for the previous project did not find the equivalent impacts unmitigable.

Figure 3-V (Following Page 3-69)

Z74 Please indicate source of information, particularly for Eelgrass distribution.

Z71 See Response Z70. The findings of the DEIR are based on a greater awareness of the biological resources and biological significance of the Midbayfront area than were the findings of the 1985 DEIR and the 1986 DEIR. The present analysis also takes into account the existence of the National Wildlife Refuge, which did not exist at the time of either the 1985 DEIR or the 1986 Final Supplemental EIR. The larger body of knowledge available at present, and the investigations undertaken for the LCPR No. 8 DEIR, revealed several biological resources that are extremely sensitive and upon which impacts would be unmitigable.

Z72 See Responses Z70 and Z71.

Z73 See Responses Z70 and Z71.

Z74 The information was based on 1986 aerial photographs and upon limited ground-truthing. This information will be updated with 1988 aerial photographic interpretation from the South San Diego Bay Enhancement Plan which indicates that the areal extent of the eelgrass beds has increased. It should be noted that the mapping from the 1988 data is also out of date at this time.

- Page 3-70, Fourth and Fifth Paragraphs
- Z75 Suggest deletion of Fifth paragraph which is a word for word repeat of fourth paragraph.
- Z76 Page 3-71, Second Paragraph
- The description of Coastal Salt Marsh in the National Wildlife Refuge addresses the marsh in the area of the Refuge north of the project site but does not include a description of the marsh in the "F" & "G" Street marsh unit of the Refuge. This omission should be corrected.
- Z77 Page 3-81, Second Paragraph
- The correct common name for Branta bernicula is Brant rather than Brants Goose.
- Z78 Page 3-86, Last Paragraph
- Suggest addition of a sentence that references the discussion of the project drainage system in a preceding section of the DEIR. For example, "The drainage system for the project is described and evaluated in Section 3.2 above."
- Z79 Page 3-87 Drainage Basin Table and following paragraph
- As presented, the Drainage Basin Table merely indicates that substantial modification in the acreage of the various "drainage basins" will occur. An explanation of the beneficial impact of most of these changes is necessary, particularly in that the table is followed by the statement,
- "The actual changes in the amount of water flowing through each system are likely to be dramatically different than the basin areas would suggest."
- This statement suggests serious adverse impacts are likely. In fact, as presented in the Rick Engineering study (cited in the Table) and as explained in the Environmental Management Section of the LCPR (see Page II-101, 103, 104), the changes in drainage basin are an integral part of the drainage system designed for the project in order to control freshwater runoff and prevent adverse impacts to both the adjoining areas of saltmarsh and bay mudflats. See also following comment.
- Z80 Page 3-88, Fourth Paragraph and Page 3-89, First & Second Paragraph
- The statements in these paragraphs do not take into account the several specific provisions of LCPR No. 8 that will ensure control of freshwater discharge from the Midbayfront uplands to adjoining salt marsh habitat.

Z81 By way of clarification, in LCPR No. 8 (page II-101) CVI commits to:

- (1) the prevention of surface drainage from the developed areas of the Midbayfront from reaching the "E" Street marsh, Vener Pond, and the Sweetwater Marsh; and
- (2) the control of surface drainage so there will be no dry-season discharge to the salt marsh portions of the "F" & "G" Street Marsh unit of the Refuge.

See LCPR (pages II-103, 104 and 107) for further explanation of the drainage control features. These stipulations and commitments are based on extensive discussions with USFWS biologists and other experts.

Thus, the discharge of freshwater to areas of salt marsh in the Wildlife Refuge will be in accordance with the management requirements set forth by USFWS and agreed to by CVI. See ,also following comment.

Page 3-89 through 3-91

Z82 Contaminant discharge, as discussed here, depends primarily on runoff through drainage channels for delivery to sensitive habitats such as the wetlands in the Wildlife Refuge.

As set forth in the preceding comment on "Increased Freshwater Input", the provisions of the LCPR No. 8 Land Use Plan (see Pages II-101, 103, et seq.) dictate a high level of control for drainage from the project area. This control in turn substantially reduces the potential for impact of contaminants on the NWR habitat areas. Specifically, the LCPR requires (Pages II-101, et seq.) that:

- (1) no surface water drainage from developed areas of the project site be discharged into the E Street/Vener Pond/Sweetwater Marsh area of the Wildlife Refuge;
- (2) drainage of surface water from the project area into the F/G Street Marsh be controlled by use of a 9.5 acre/feet capacity desilting basin, a triple chamber sediment and oil/grease trap, and a discharge control structure; and
- (3) that discharge from the desilting basin drain into a 3.5 acre area of year-round fresh water marsh.

As requested by USFWS, this system also has the capability to prevent any dry season discharge of fresh water to the F/G Street salt marsh.

Z83 In short, because of the strict controls on delivery of surface runoff to the Wildlife Refuge, there will be extremely limited potential for delivery of contaminants to the Refuge. Consequently, the conclusion in the fourth paragraph on Page 3-91 that

the impact of potential contaminant input is considered significant and unmitigable should be changed to read: "potentially significant but mitigable".

Page 3-91 and 3-92

With regard to Sediment Accretion and Erosion the LCPR No. 8 Land Use Plan (Environmental Management section) sets forth provisions which dictate a high level of control for drainage from the project area. This control in turn substantially reduces the potential for sediment accretion and erosional impacts on the sensitive habitats of the adjoining NWR and of the Bay shoreline and mudflat area.

Specifically, as explained in the preceding comment, surface runoff from the developed areas of the site will not enter the E Street/V-Wener Pond/Sweetwater Marsh complex bordering the northern margin of the uplands. Surface runoff to the F/G Street Marsh will also be rigorously controlled as detailed above.

Surface runoff delivered directly to the bay via the storm drain system will, prior to entering the bay, pass through a three chamber trap for sediment, oil and grease. In addition, to reduce flow velocity to a level that will virtually eliminate scour of the adjoining mudflat, the drain will terminate in an energy dissipator. With the use of these controls, the potential for damage to the mudflat or to the eel grass beds near the bayward edge of the mudflat by either scour or sediment accretion seems remote. Thus the adverse impacts on the mudflat and eelgrass are expected to be minimal.

In addition, it should be noted that the Corps of Engineers Section 404 Permit for the project contains a provision for a special monitoring program to determine whether or not the project results in damage to the mudflat areas marginal to the property.

Page 3-93, Second Paragraph
(see also Page 3-106, Construction Impacts)

Z85 The LCPR No. 8 Land Use Plan (see Pages II-86, 87, II-95, 96 et seq., and III-39 through 42) specifies a series of special measures that shall be used to control potential impacts associated with the construction phase of the proposed project. These measures include a Grading Plan that incorporates various runoff and erosion control features to be used during all phases of project development. The Grading Plan will include:

- (1) Measures to protect sensitive environmental areas during grading;
- (2) Implementation of the 100-foot set back as a key element of the first phase of construction prior to mass grading;
- (3) Establishment of catchment basins, detention basins, and sediment traps;

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| Z86 | <p>(4) Installation of silt fences at the construction site; and (5) Use of energy dissipating measures at the outlet of storm drains.</p> <p>Accordingly, the impacts from project construction activities though potentially significant will be mitigated to a level of minimum significance.</p> | Page 3-93, Wildlife Resources Impacts | Z86 | Comment noted. However, strictly speaking, impacts should be defined as either significant or not significant. "Minimal significance" is unclear. We contend that construction impacts will be significant but mitigable. |
| Z87 | | | Z87 | Commented noted. Clarification of the buffer system was provided in the DEIR. See Response V2. |
| Z88 | | | Z88 | Comment noted. |
| Z89 | | | Z89 | Comment noted. Text changes have been made. |
| Page 3-93, Wildlife Resources Impacts | | | Page 3-93, Wildlife Resources Impacts | |
| Z87 | | | Z87 | This paragraph includes the statement: |
| Z88 | <p>"Tall buildings as well as shorter statured structures and parklands are to be situated over the bayfront uplands, isolated from the majority of the wetlands by a buffer zone of not less than 100-foot width marking the boundary of the National Wildlife Refuge."</p> | | Z88 | As stated, this sentence is misleading. The "...buffer zone of not less than 100-foot width..." will be on the CVI side of the boundary. It is important to recognize that another 100-foot wide buffer on the USFWS side of the property line separates the wetland from the boundary. Thus, the separation distance from the wetland generally will be 200 feet or more. Please adjust the paragraph to reflect this clarification. |
| Page 3-95, Human/Pet Presence Impacts | | | Page 3-95, Human/Pet Presence Impacts | |
| Z88 | <p>CVI acknowledges the importance of the potential adverse impacts discussed in this section. By means of the contractual provisions of the Habitat Restoration and Management Program (described above), CVI is committed to a well-staffed and funded Predator Management Program that will include: a) major efforts to control cats and other man-related predators, and b) vigorous enforcement of access control for humans, including citation of trespassers.</p> | | Page 3-98, Third Paragraph | |
| Z89 | | | Z89 | The first sentence in this paragraph states: |
| | <p>"Under the proposed Development Plan, tall buildings encroach as close as 100 feet from the marsh..."</p> | | Page 3-98, Third Paragraph | |
| | <p>Inspection of the proposed Development Plan (Figure 2-IV following Page 2-6) confirms that none of the high-rise buildings shown will be less than <u>150</u> feet from the boundary of the National Wildlife Refuge. Further, it is important to recognize that inside the Refuge, a 100-foot wide buffer is present between the marsh and the Refuge boundary. (See comment for Page 3-93 above).</p> | | Page 3-98, Third Paragraph | |

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| <p>Z90 The calculations reported here show no indication of taking into account the existence of this 100-foot wide buffer <u>inside</u> the Wildlife Refuge boundary.</p> | <p>Further, the CVI Revised Project (dated 9/26/90) reduces the heights of most of the project's high-rise structures. This reduction in height will serve to lessen impacts on biological resources.</p> <p><u>Page 3-99, Third Paragraph</u></p> | <p>This paragraph ends with:</p> <p>"The general lack of avian nesting adjacent to the Rohr building bordering the "F" & "G" Street Marsh is believed to be the result of both real and perceived threats of predation, however, in the absence of any predator controls in this area, these factors are not readily separable."</p> | <p>The significance of this judgement (that "real and perceived threats of predation" are believed to have been the cause of the lack of nesting adjacent to the Rohr building) is questionable because for the location cited at least two additional factors must certainly effect nesting. These are:</p> <ol style="list-style-type: none"> (1) the severely degraded character of habitat along much of this margin of the F/G Street Marsh; and (2) the at least twice-daily pulse of vehicular traffic along the dirt track immediately bordering this margin when the track is used as a shortcut by workers from various facilities in the area. <p>It should be noted that USFWS and Rohr Industries are coordinating efforts to prevent future vehicular use by blocking access to this track.</p> <p><u>Page 3-100, Fifth Paragraph</u></p> | <p>Z91 The "calculation" of the distance between the nearest tall building and the boundary of the Refuge does not need to consider the existence of the 100 foot buffer inside the Refuge.</p> | <p>With regard to the lack of nesting in the "F" & "G" Street Marsh, we believe that the degree of degradation of the marsh is a minor factor in comparison to disturbances due to the proximity of human activity. Note that human activity nearby may be perceived as a threat and lead to nest abandonment. As stated in the DEIR, however, it is difficult to differentiate the effects of real versus perceived threats without some controls on real threats (i.e., predation).</p> | <p>Z92 Comment noted.</p> |
| <p>Z92 CVI acknowledges the need to create and/or restore additional wetland and wildlife habitat in areas outside the zone subject to project impact. Determining the size, type, and location of this additional habitat is a complex matter which involves a careful balancing of a number of biological and physical factors.</p> <p>In this connection, in discussing predator/competitor threat levels within the bayfront, this paragraph includes the following statements:</p> <p>"Of highest concern is the 3840 foot length of marshland fringing the "E" Street Marsh, Vener Pond, and the Sweetwater Marsh. It is most probable that the predomi-</p> | | | | | | <p>89-04-038 03/08/91</p> <p>47</p> |

- Z93 want impacts will be restricted to the shoreward 100-150 feet of marshlands (13.2 acres)."
 CVI is concerned the definitive, conclusive nature of these statements and their unwarranted degree of specificity. From the material presented, it is unclear as to how the figures given were arrived at. Specifically, please address the following questions:
- Z94 (a) What is the basis for the choice of the 100 to 150 foot width for the "zone of impact"?
 (b) What is meant by the term "shoreward"? The CVI Project generally is located landward (not shoreward) of the E-Street and Vener Pond marsh areas and southerly of the Sweetwater Marsh area.
- Z95 How was the 3840 foot length arrived at? There is a marked difference in type of wetland/upland habitat interface along the northerly margin of the CVI property bordering the Sweetwater Marsh and the northwesterly margin bordering the E-Street Marsh and Vener Pond. How is this major difference in types of ecologic factors taken into the calculation of width of the "impact zone"? How does the conclusion drawn (i.e. "...that the predominant impacts will be restricted to the shoreward 100-150 feet of marshlands...") reconcile with the apparently contradictory second sentence in the third paragraph of this same page, which states:
- "The results of this analysis indicated that perceived threats might be expected within the buffer zones of the wildlife refuge, but these threats would not be expected to extend into the sensitive wetland areas."
- Z96 (c) How was the 3840 foot length arrived at? There is a marked difference in type of wetland/upland habitat interface along the northerly margin of the CVI property bordering the Sweetwater Marsh and the northwesterly margin bordering the E-Street Marsh and Vener Pond. How is this major difference in types of ecologic factors taken into the calculation of width of the "impact zone"? How does the conclusion drawn (i.e. "...that the predominant impacts will be restricted to the shoreward 100-150 feet of marshlands...") reconcile with the apparently contradictory second sentence in the third paragraph of this same page, which states:
- "The results of this analysis indicated that perceived threats might be expected within the buffer zones of the wildlife refuge, but these threats would not be expected to extend into the sensitive wetland areas."
- Z97 CVI believes that a considerably more careful analysis of this issue is warranted prior to:
- (1) Specifying the dimensions and location of the areas of principal impact; and
 - (2) Choosing from the various alternatives available, the most prudent and effective means of mitigating the impact.
- Note that the CVI Revised Project (dated 9/26/90) reduces the height of most of the project's high-rise structures. This should lessen the impacts on the adjoining wetlands.
- Page 3-101, Alteration of Habitat Use Areas Section
- Z98 The material presented in this section does not take into account the major benefits to habitat that would result from approval of the proposed TCRP No. 8. In this regard, CVI has committed to a major restoration and enhancement program for the degraded areas of

Z93 See Response W66.

Z94 See General Responses 3.3.6.1 and 3.3.6.2.

Z95 Shoreward means towards the shore. In this case, shoreward means away from the development and into the marshlands (for a distance of 100-150 feet).

Z96 Refer to General Comments 3.3.6.1 and 3.3.6.2.

Z97 Pg. 3-93 of Volume II refers to the distance into the marshlands to which perceived threats are expected to exert an influence. As stated, perceived threats are not expected to extend into the sensitive wetland areas beyond the buffer zone (as you move away from the development and into the Refuge). The reference to the distance into the marshlands to which real threats are expected to extend has been deleted.

Z98 See Response W66, and refer to General Comments 3.3.6.1 and 3.3.6.2. Is We recognize that the habitat restoration and enhancement will have positive effects on the marshlands.

- Z100** the F/G Street Marsh as set forth in the "Habitat Restoration and Enhancement Features and Actions" section of the LCFR's Land Use Plan (see Pages 11-04 through 108, Table 3, and Figure 11).
 The proposed Land Use Plan specifies restoration of at least seven (7.0) acres of new wetland habitat and enhancement of at least one-half (0.5) acre of degraded wetland, as well as restoration of at least two (2.0) acres of coastal sage scrub as wetland/upland transition habitat.
- These restoration and enhancement actions (which will be set forth in detail in the Habitat Restoration Plan, [see LCPR at Page II-107], are being developed in cooperation with the USFWS) should be cited in this section of the DEIR and reference made of the habitat and wildlife benefits that will result.
- Page 3-106, Construction Impacts Section
- LCPR No. 8 includes a number of provisions to control construction impacts as set forth in the preceding comment and LCPR citations re Construction Impacts (at Page 3-93 above). These control measures are expected to reduce the potential impacts called out here to a level of minimum significance.
- Z101** The containment of silt run-off during storm events may be effectively contained through the implementation of an erosion mitigation plan utilizing temporary storm drain structures, siltation basins, sand bags and/or silt fencing.
- Page 3-107, First Paragraph
- As discussed in the comment concerning Page 3-23, Third Paragraph, a lagoon intake system will not be required.
- Z102** Page 3-107, Second Paragraph
- As discussed on Page 3-23, paragraph 3, a lagoon intake system will not be required.
- Page 3-107, Impacts to Eelgrass Section
- Z103** CVI acknowledges the important biological values of eelgrass. LCPR No. 8 Land Use Plan and specifically the Environmental Management section (Pages II-08 through II-112) contains a series of provisions controlling surface water discharge and sediment accretion/erosion that should ensure minimal impact to this important resource. (See more detailed discussion above, at Comment re Page 3-91, "Sediment Accretion and Erosion".
- Z104**

Z100 See Responses Z99 and Z86.

Z101 Refer to General Response 3.3.7.2.

Z102 Comment noted. Refer to General Response 3.2.2.3.

Z103 Comment noted.

Z104 Comment noted.

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| Z105 | <u>Page 3-107, Impact to Mudflats</u> | Z105 | Comment noted. Refer to General Response 3.3.8.1. |
| Z106 | As explained above in the Comment concerning Page 3-91 (Sediment Accretion and Erosion) as a result of the use of sediment traps, and energy dissipators, the potential for sediment accretion and erosional impacts on the sensitive mudflat and eelgrass habitats are expected to be minimal. | Z106 | See Response Z102. |
| Z107 | As discussed on Page 3-23, Paragraph 3, a lagoon intake system will not be required. | Z107 | The statement refers to opportunities for the enhancement and areal expansion (i.e., restoration) of wildlife habitat. There are few locations in southern California where such opportunities for restoration and/or enhancement exist. The proposed development of the Midbayfront will remove upland habitat that is now valuable foraging habitat for raptors (see General Responses 3.3.4.2 and 3.3.4.3). This upland habitat could be enhanced to increase its already high value to raptors, and to increase its value to other wildlife. |
| Z108 | <u>Page 3-109, Cumulative Impacts Section</u> | Z108 | Refer to General Response 3.3.4.1. |
| Z109 | This paragraph states, | | "The development of the Midbayfront site would result in the loss of substantial enhancement and habitat expansion opportunities which occur in only a handful of locations in Southern California." |
| Z110 | | | As written, this statement is ambiguous. It is not clear what is meant by "loss of expansion opportunities" and enhancement opportunities, nor how this pertains to the CVI Midbayfront project. |
| Z111 | | | This statement should be clarified by explaining specifically what type of habitat expansion and enhancement opportunities are meant. In addition, specify examples of at least some of the "... handful of locations in Southern California" where equivalent opportunities are thought to be available. |
| Z112 | | | Without the information requested, it is difficult to evaluate the accuracy of the statement and the appropriateness of the conclusion "...that this lost opportunity would be considered to be significant..." |
| Z113 | | | Further, this section should acknowledge that development of the 135 acres of upland comprising the Midbayfront project site were a major condition agreed to by resources agencies in arriving at the transfer of 316 acres of privately owned wetlands and other valuable habitat to the Federal Government in order to form the Sweetwater Marsh National Wildlife Refuge. See: Stipulated Settlement - Sierra Club vs Marsh et al., U.S. District Court for the Southern District of California, Civil No. 86-1942-GR (IEG), April, 1988. |
| Z114 | | | Finally, the DEIR should point out that any of the project alternatives considered would result in the same loss, and that only the CVI Project commits to major wetland and wildlife habitat restoration in degraded areas of the National Wildlife Refuge. |

Page 3-112, First paragraph

Z109 In this introductory discussion of mitigation measures, a statement should be included that acknowledges the substantial degree of protection the proposed project design affords many of the environmental resources adjoining the site. Further, reference should be made to the specific measures already committed to by CVI by specific inclusion in the LCPN No. 8 Land Use Plan (at pages cited in several preceding comments).

Z110 In addition, these commitments should be identified in the following list of numbered mitigation measures, just as the impacts mitigated are also identified. Without such identification, the section as written conveys the sense that none of these measures have been previously addressed (let alone in many cases, committed to) by CVI.

Page 3-112, Requirement 1

Z111 The Environmental Management section of LCPN No. 8 (see Page II-103, 105, 107 and Figure 11) commits CVI to a major restoration and enhancement program for the degraded portion of the "F" and "G" Street Marsh. Restoration will include construction of a new Fresh water marsh of at least 3.5 acres. As requested by USFWS, during the dry season, water from the desilting basin will discharge into this Fresh water marsh, but will not be released into the salt marsh. Wet season storm water will discharge from the desilting basin into the Fresh water marsh and then into the salt marsh. Thus, there is no need for a "direct to the bay" delivery system for diversion of low flow runoff.

Page 3-112, Requirement 2

Z112 The paragraph states:

" All post-construction collector drains should be directed through large volume silt and grease traps..."

The LCPN No. 8 (at Page II-103, 104) commits to the installation and maintenance of three chamber oil/grease and sediment traps at various key locations in the drainage system.

In addition, preceding comment re oil and grease traps at Page 3-16.

Page 3-112, Requirement 3

Z113 CVI commits to regular, scheduled maintenance of oil/grease and sediment traps using acceptable procedures as will be detailed in the Mitigation Monitoring Program required by the City.

Z109 Comment noted. The requested references are not necessary since the analysis presented in the DEIR takes into account the provisions of the LCPN No.8.

Z110 See Response Z109.

Z111 We concur that there is no need for a direct-to-bay delivery system for diversion of low flow runoff.

Z112 Comment noted.

Z113 Comment noted.

Z114 Page 3-112, Requirement 4

The rationale for the suggested prohibition of silt removal maintenance from/for the desilting basin is difficult to understand. Removal of sediment, if such becomes necessary during the operational life of the project, would be both technically appropriate and biologically desirable to ensure protection of the fresh water marsh to be created in the F/G Street Marsh.

Z115 Page 3-112, Requirement 5

This section suggests using either:

- (a) an extension of the two "direct to bay" storm drain outlets across the mudflat and eelgrass beds to the boat channel some 1500 feet offshore, or
- (b) the installation of effective energy dissipators and flow diffusers for the storm drain outlets if located at the bay shoreline.

As set forth in the LCPR No. 8 (see Page II-104), appropriately sized energy dissipators and flow diffusers will be installed at the outlet for each storm drain. These measures will ensure that the flow velocity across the mudflat is sufficiently low as to virtually eliminate scour of the mudflat. They will also ensure protection of the eel grass beds situated along the bayward (deeper) margin of the mudflat. (See comment for Pages 3-91 and 3-92 above.)

Z116

With reference to monitoring the effect of these storm drains, Special Condition 10 of the Corps of Engineers Section 404 Permit for the project requires a plan for monitoring of the mudflat areas adjacent to the storm drain discharges. This Corps required Plan shall include proposed corrective actions to be implemented by CVI should monitoring indicate degradation. The Special Condition also requires that this monitoring plan be reviewed by the Corps in coordination with the resource agencies and work authorized under the Corps permit shall not begin until CVI receives written approval of the plan from the Corps.

This mudflat monitoring plan will be incorporated in the overall Monitoring Program that forms an integral part of the Habitat Restoration Program (see LCPR No. 8 at Page II-108) now being prepared in cooperation with the USFWS and other resource agencies.

The DEIR recommends that:

"...any impacted areas resulting should be replaced by creation of a similar area from the uplands of the D Street fill or Gunpowder Point."

Z114 See Response C2.

Z115 Comment noted.

Z116 Comment noted. Refer to General Response 3.3.8.1.

Z117 Comment noted. See Response W66.

In view of the provisions of the Corps and resource agencies required Monitoring Plan, this recommendation seems both premature and unnecessarily specific.

Page 3-113, Requirement 6

Z118 Saltwater wells appear feasible, thus the saltwater intake system will not be required.

As to the effects of groundwater pumping as a source of water for the artificial lagoon, it should be noted that results of the groundwater investigations by Geocon Environmental Consultants (pg. 3-23, 3rd paragraph comment) show that a well field located along the west margin of the property near San Diego Bay will provide an adequate supply of brackish to saline water for both artificial lagoons. Therefore, a salt water intake in the bay will not be needed.

In addition, this withdrawal of groundwater is highly unlikely to have any measurable effect on the level of the water table in either the "E" Street marsh or the "F/G" Street marsh.

Page 3-113, Requirement 7

Z119 As to the April/September period when no in-water construction is to be allowed, the dates should read: "April 15 through September 1", in conformance with the dates specified in Special Condition No. 5 of the Corps of Engineers 404 Permit for the project.

Page 3-113, Requirement 8

Z120 As to control of storm runoff and sedimentation during the construction phase, LCPR No. 8 sets Performance Standards (see page III-38 through 43) that are more comprehensive than the recommendations stated here. Inclusion in LCPR No. 8 constitutes a commitment by CVI.

Page 3-113, Requirement 11

Z121 As to landscape plant materials, CVI's landscape consultants are in contact with the City's biological consultant (Pacific Southwest Biological Services) as to recommendations concerning which plants are most desirable and which should be avoided. The Plant Palette set forth in Figure 4-13 of the LCPR No. 8 (see Page III-96) has been reviewed with PSBS in some detail.

Z118 Refer to General Responses 3.2.2.3, 3.2.3.3 and 3.2.3.5.

Z119 Comment noted. Text changes have been made.

Page 3-113, Requirement 6

Z120 Comment noted.

Z121 Comment noted.

Page 3-114, Requirement 15

Z122 This requirement deals with restriction of human access to marshlands and buffer areas by means of fencing and signs. CVI acknowledges the importance of restricting human access to these sensitive habitat areas. LCPR No. 8 (at Page II-101, 103, 107) provides for, and CVI commits to, the required fencing. Details on fencing design and placement are being worked out with resource agencies and will be incorporated in the Habitat Restoration Plan. The Habitat Restoration Plan will include requirements for fencing and visual buffers at the mouth of the tidal channel feeding the P/G Street Marsh.

Page 3-114, Requirement 16

Z123 CVI acknowledges the need for an effective Predator Management Program and is working with the USFWS and other resource agencies as to the scope, organization, operational procedures and funding for this work. CVI anticipates that the Predator Management Program will be a component element within the overall Habitat Restoration Program that is currently being developed in discussions with USFWS and CFGG.

Page 3-114, Requirement 17

Z124 Various alternatives concerning the most effective organizational structure, area of responsibility, breadth of authority, and arrangements for funding of the Predator Management Program are being considered by CVI in discussions with USFWS, other resource agencies, and the City of Chula Vista in connection with developing the overall Habitat Restoration and Management Plan. Predation is an existing problem and management responsibilities extend beyond the Midbayfront area. Consequently, the responsibilities and funding of a Management Program needs to be apportioned among all the parties surrounding the National Wildlife Refuge.

Page 3-114, Requirement 18

Z125 See preceding Comment.

Page 3-114, Requirement 19

Z126 As explained above in General Comment 4 above and as set forth in LCPR No. 8, (Pages II-88, 89 and 102 et seq.), CVI has committed to a comprehensive Habitat Restoration and Enhancement Program for the P/G Street Marsh which meets and/or exceeds these requirements.

- This Restoration and Enhancement Program at F/G Street includes:
- (1) donation of three acres of CVI land west of Marina Parkway; and
 - (2) Conversion of this upland to tidal salt marsh.
- Page 3-115, Requirement 26
- Z127** This requirement addresses the need to offset impacts associated with potential encroachment, predation, and loss of habitat use by avian species as a result of construction of the CVI Midbayfront project and suggests creation of new marshland, mudflat and salt pond habitats on Gunpowder Point.
- CVI has acknowledged (LCPR No. 8 at Page II-100) that creation (restoration and enhancement) of new wetlands and related wildlife habitat may be necessary in order to offset impacts associated with the Project. CVI is currently working with USFWS, and other resource agencies to determine the preferred location and mix of habitat types and sizes that will be appropriate as compensation. This would be documented in the Habitat Restoration Plan construction document described above. In view of the ongoing nature of the discussions re compensation, the specificity of this recommendation seems premature.
- Page 3-116, Second Paragraph
- Z128** This paragraph states...:
- "Of primary concern are the effects of increased predator presence, specifically in the areas of wetlands fringing the Midbayfront. Included in this is the creation of threats to nesting by the Belding's Savannah Sparrow and Black-necked Stilt. In addition, increased predation upon Light-footed Clapper Rails and potentially the California Least Tern Colony could potentially result from raptors utilizing these buildings."
- Which predators are referred to in the first sentence? If raptors (as implied by the third sentence), please specify which raptors?
- Z129** In this regard, it is Peter Bloom's opinion (personal communication) note that of the raptors present during the prey species' nesting season, only the peregrine falcon is likely to be attracted to the project's proposed high-rise buildings. It is also Bloom's opinion that by proper design of building exteriors, peregrine use of tall buildings as nest sites can be prevented and that use for perching can be severely discouraged. (See Evans and Bloom Letter dated, 9/21/90.)

Z127 Comment noted. See Response W66.

Z128 Predators implied include Common Ravens, American Kestrels, Red-tailed Hawks, and Peregrine Falcons.

Z129 Comment noted. We disagree that Red-tailed Hawks, Ravens, and American Kestrels would not be important concerns at these buildings. We do concur that the buildings may be made substantially less attractive as perch sites. See General Response 3.3.3 through 3.3.3.3.

- Z130** Note also that the raptor population using the upland for foraging (see DEIR Page 3-101), is primarily a wintering population that will have left the area before the species cited in this paragraph begin nesting (P.Bloom, personal communication).
- Z131** Please clarify why the Black-necked Stilt is called out as a prey species of special concern.
- Z132** Where is the California Least Tern colony located that is referred to? If this is the nesting colony that uses the western part of the D-Street Fill, please specify approximate distance between the northern-most CVI proposed high-rise and the colony.
- Z133** Note also that the reduction in height of most of the high-rise structures per the CVI Revised Project (dated 9/26/90) will also reduce the potential for peregrine Falcon use.
- Page 3-116, last sentence
- "Minor, or even major movements of these buildings with the Bayfront could potentially reduce these impacts, but would likely not lessen them to a less than significant level."
- Z134** In P. Bloom's opinion (personal communication), with proper design and equipage of building exteriors, nesting by peregrine Falcons can be prevented and perching can be severely discouraged. Further, even a cursory field examination of the areas adjoining the D-Street fill nesting site reveals the presence of a number of high to moderately high perching sites already available in the immediate vicinity of the nesting site. These include: a) the IT&T building on the north side of the Sweetwater Channel, b) the DUPD container loading crane somewhat farther north, c) the peaked roof of the Chula Vista Nature Interpretive Center on Gunpowder Point, and d) the series of SDG&E 150-foot high transmission towers situated just east of the eastern end of the D-Street Fill. The presence of these already available perches lessens the significance of the buildings proposed by CVI.
- Page 3-116, last sentence
- As to the judgement that the potential impact of contaminant discharge is "...significant and unmitigable until additional information...is available". See comment above re Page 3-89 through 3-91 which demonstrates that the impact of contaminant discharge is potentially significant but mitigable.
- Z130** See Response Z129.
- Z131** The black-necked stilt is called out as a species of special concern due to its colonial nesting on the site. Birds taken outside of the nesting area are not considered important, however extensive predation within the colony could result in colony abandonment.
- Z132** The least tern colony location will be shown in Figure 3-VI of the DEIR. The "D" Street Fill tern colony is located 2600 feet from the nearest 176 foot apartment building.
- Z133** Comment noted.
- Z134** Comment noted. See General Responses 3.3.3 through 3.3.3.3. While we agree that the "D" Street Fill has serious predator problems in its current state, the addition of more and higher predator perches will add to these problems. Given the endangered status of the terns, this added impact forces an automatic finding of significance.
- Z135** See Response Z83.

SECTION 3.9 LAND USE/GENERAL PLAN/ELEMENTS/ZONING

Page 3-136, Third Paragraph

Z136 With regard to the compatibility with surrounding area land uses, this paragraph states that,

"Thus, though the types of land uses result in no land use consistency impacts with the surrounding area, the intensity of land uses would result in a significantly greater intensity of development than what was envisioned for this site and how it relates to the surrounding area. This is considered a significant land use impact."

This analysis presupposes that any future land use intensity must be measured against the previously adopted LCP. In fact, the EIR previously states (Page 3-135, 2nd paragraph) that,

"The expectation of what the acceptable intensity of development should be is probably best defined in the City's existing certified LCP, which allows a maximum of 2.5 million square feet of building area over the site."

Z137 There is no professional basis for this "expectation".

Z138 The conclusion that the proposed project and alternatives 3, 4 and 5 are significant and not mitigable is based on a flawed analysis. The flaw in the environmental analysis is selecting the old LCP as the "land use" yardstick. The evaluation of the applicant's proposed Local Coastal Plan would appropriately analyze and contrast the intensity of development proposed in each alternative plan, but it is not appropriate to set up the old LCP alternative as the yardstick of what is acceptable. The proposed project is a resubmittal of the existing LCP, not a development project to implement the existing LCP. As a plan, the resubmittal may be an equally valid planning concept as the existing LCP.

Z139 The purpose of the resubmittal is to examine and evaluate different planning concepts. To say that the resubmittal is a significant impact on the environment because it is different than the existing plan is an improper environmental analysis. A proper analysis is to analyze the impacts of each plan on the environmental resources of the area.

Z140 The same flaw occurs in the analysis that leads to the conclusion that the project and alternatives 3, 4 and 5 would have significant, unmitigated impacts on the General Plan Bayfront Redevelopment Plan.

Z136 See Response Z11. Also, the paragraph quoted ends with the sentence, "The existing LCP went through exhaustive public and agency review before its certification, resulting in a plan that attained most public and agency acceptance."

Z137 This comment is noted.

Z138 These comments are noted. The intensity allowed by the certified LCP is considered to be an appropriate basis for comparison. In addition, the analysis of the intensity of development used two other "yardsticks," which included (1) actual densities in the surrounding area, and (2) densities of similar types of projects.

Z139 See Response Z138. Also, the DEIR does not say that "the resubmittal is a significant impact on the environment because it is different than the existing plan..." What it does say on pp. 3-132 and 3-133 of Volume II is

"the intensity of land uses would result in a significantly greater intensity of development than what was envisioned for this site and how it relates to the surrounding area. This is considered a significant land use impact. Additionally, the LCPR No. 8 does not set a maximum density for the "Residential High" category, thus the significant impact could be worsened with the potential of higher densities than what is proposed in the Development Plan. Intensity impacts also relate to visual quality, community character and public access. The combination of these impacts results in cumulative project-related impacts.

Z140 The DEIR text provides mitigation for consistency with the General Plan and Redevelopment Plan. The Summary Table I-1 has been corrected in Volume I, Table 6-i, to reflect the text.

Page 3-137, Second Paragraph

Z14: These comments are noted. Also, see Response Z3.

Z141 Settlement of the Midbayfront litigation resulted in transfer of 315 acres of private property to Federal ownership and the creation of the Sweetwater marsh national Wildlife Refuge. this same settlement agreement also provided development entitlements for the remaining 135 acres (i.e., the degraded uplands now termed the Midbayfront).

LCPR No. 8 specifically addresses compatibility of development on this core area of uplands recognizing their proximity to the wetlands and wildlife habitat of the National Wildlife Refuge.

As stated in LCPR No. 8's Environmental Management section (and called out in several preceding comments), CVI acknowledges that development will have certain residual impacts that cannot be mitigated to a level of insignificance. Accordingly, CVI has committed to compensate for these residual impacts by carrying out restoration of appropriate habitat acreage in degraded portions of the National Wildlife Refuge, primarily at the "D" Street Fill and on Gunpowder Point.

SECTION 3.12 PARKS, RECREATION AND OPEN SPACE

Z142 Page 3-154, Third Paragraph

This paragraph states that,

"Based on City Threshold Standards, the amount of Parkland in the project area is more than adequate to service project area residents (City's Threshold Standard requirement: 3 acres per 1,000 project residents; anticipate 3,000+ residents) and no impacts would occur to this City requirement (Mellinedo 1989)."

However, the Feasible Mitigation Measures in the Summary Table (Table 1-2, page 8) states that,

"Provision of a greater amount of parkland than is presently designed by the proposed project."

Since the text of the EIR concludes that there is no impact, imposing a mitigation measure for more parkland seems unreasonable. We request clarification as to which City standards would require additional parkland to be dedicated.

Further, the Sept. 26, 1990, revision of the project adds 3.7 acres of park area at the foot of F Street and 0.6 acres of buffer area west of the Luxury Hotel.

Page 3-158, Top of Page

Z143 In the last sentence in the paragraph ending at the top of the page the EIR states,

"Also, the Plan is inconsistent where it calls for both 'Parking lots and Parks under the SDG&E ROW.'"

The Revised Project (9/26/90) for this area specifies that the SDG&E right-of-way be used for landscaped parking to be built in Phase II.

Page 3-158, First Paragraph

Z144 This paragraph states that,

Based on discussions between City staff and Port District staff regarding parking needs for Bayfront Parks, 1.0 parking spaces per 1,000 square feet of Parkland is a standard that is reflective of the parking for Bayfront Parks."

Z142 The City of Chula Vista's Threshold Standards pertain to project area residents and their needs. The mitigation for a greater amount of parkland pertains to the regional demand created by the cumulative impacts of project development encouraging visitor use, the bayfront/wetland-front location, and the proximity to the Nature Interpretive Center. See the discussion on pp. 3-147 and 3-148 in Volume II.

The revised Development Plan is analyzed as Alternative 8 in the DEIR, Volume I, Section 4.0.

Z143 The revised Development Plan is analyzed as Alternative 8 in the DEIR, Volume I, Section 4.0.

Z144 The parking discussion has been modified in response to this comment. See Section 3.12 of the DEIR.

This requirement seems quite high as it would translate into approximately 40 percent of each acre of park being devoted to parking.

The Chula Vista Municipal Code, Title 19 lists parking requirements for different uses, but does not define requirements for public parks. There is no mention in the EIR as to the rationale regarding this standard other than discussions between the City and Port District staffs. No current discussions between the City and standards are cited. The currently adopted LCP calls for 1 parking space per 10,000 square feet of parkland (See Page 3-26). In other words, the presently proposed project is being asked to provide ten times as much parking for park area than does the adopted LCP.

Page 3-159, First Paragraph

Z145

This paragraph concludes that the shadows produced by the buildings of the proposed project will be "potentially significant" because the park and core area usage during evening hours is expected to be high. On page 3-160 (1st paragraph) the EIR states that the buildings would have to be lowered to a height of 6 to 12 stories to mitigate the impacts.

The EIR does not contain an analytic basis for concluding that shadows result in an environmental impact. No adverse effects to the National Wildlife Refuge or to the human environment are present in the EIR. Thus, the conclusion that the shade and shadow effects are a significant effect has no factual basis. The conclusion that the shade and shadow effects result in a significant effect should be rewritten to conclude that there is no significant effect. Furthermore, it should be noted that the Sept. 26, 1990, revisions have substantially reduced the height of a number of buildings (see comments concerning Section 2-4 of the EIR).

The height reductions would reduce the shade and shadow effects illustrated in the EIR.

Page 3-160, First Paragraph

Z146

This paragraph states that a,

"greater amount of parkland . . . would help to work toward the City requirements."

and that,

"it is important that the parkland be contiguous west of Marina Parkway."

Z145 The text has been modified to clarify the finding of significant impact, and the mitigation. See Section 3.12 of the DEIR. The analysis of the buildings, which have been reduced in height in the revised development plan, is analyzed as Alternative 8 in the DEIR, Volume I, Section 4.0.

Z146 These comments are noted. The analysis of the revised Development Plan is analyzed as Alternative 8 in the DEIR, Volume I, Section 4.0.

Z147 This comment is noted.

The revised project (9/26/90) increases the total amount of park acreage by 4.3 acres (18.9 to 23.2 acres). All of the added parkland would be west of Marina Parkway (3.7 acres at the foot of F Street and 0.6 acres adjacent to the Luxury Hotel).

A reduction in the number of bungalows at the Luxury Hotel provides for a continuous buffer park west of Marina Parkway. As shown in the revised phasing plan, 16.0 acres of parkland is included in Phase 1. The remaining 7.2 acres would be constructed in Phase 3.

The Parkland provides public access to the bayfront not now available. This access would implement the goals of the General Plan and the Coastal Act.

Page 3-160, Second Paragraph

Z147 It should be noted that the need for additional gardeners would not be a direct responsibility of the proposed project, but would be included in the overall City-wide Park Department staffing.

SECTION 3.13 UTILITY SERVICE
Page 3-164, Fourth Paragraph

Z148 No proposed plans or feasibility studies have been developed regarding the use of reclaimed wastewater or the exchange of effluent derived from the project for additional water rights. However, the water quality impacts of the use of reclaimed water will need to be addressed, especially in view of proposed and existing discharge requirements to the San Diego Bay.
Page 3-170, Fourth Paragraph

Z149 The GEC September 1990 report discussing groundwater supply indicates that groundwater is a feasible source, for both quality and quantity, for the proposed lagoon.
Page 3-174, Second Paragraph

Z150 The groundwater supply report of September, 1990 addresses both quantity and quality issues. Overall, the water supply utilizing a series of wells located along the western (San Diego Bay side) of the property should be sufficient to meet the anticipated peak demand. A pipeline to the bay will not be required given that a groundwater supply can be provided for the proposed lagoons.
Page 3-175, Second Paragraph

Z151 This paragraph concludes school transportation costs are a significant impact since no funding mechanism exists (see also page 3-177, 1st paragraph). There are a variety of funding mechanisms available such as a Mello-Roos district that will reduce these impacts to a level of insignificance.
Page 3-176, Paragraph 5

Z152 See comments concerning page 3-174, 2nd paragraph.

Z148 The applicant has not proposed a water reclamation system, thus, it was not analyzed in the DEIR. However, in Response to Comment CC5, it was recommended that water reclamation lines be built to utilize this future resource opportunity.

Z149 Comment noted. It should be noted that additional hydrological and biological studies will be necessary at the project level of CEQA compliance in order to evaluate whether groundwater pumping will have adverse effects on sensitive wetlands and species. Furthermore, additional testing and monitoring will be required at test wells to verify that groundwater quality is suitable for the project lagoons.

Z150 Comment noted. See Response Z149.

Z151 The school impact and mitigation sections have been modified in response to comments from both Districts. See Section 3.13 of the DEIR.

Z152 See Responses Z149 and Z150.

SECTION 3.14 TRAFFIC

Page 3-179, Second Paragraph:

Z153 The sentence, "This increase in trolley frequency will negatively impact available capacity and result in an overall reduction in capacity of approximately 10 percent (assuming all gate crossings are operating with the new electronic delay device)," is not accurate. With the trolley gate down, the traffic signals at the "E" Street/I-5 ramp intersections operate with flashing red signals. After stopping, traffic can legally move through the intersection if the vehicle's path is clear. For example, the eastbound to northbound left turn movement at the I-5 northbound on-ramp can be made on the flashing red signal. Also, the northbound to westbound left turn from the northbound off-ramp can also be made after stopping. Therefore, the effect of the trolley gate operation is a reduction of less than 10 percent of intersection capacity. An example using existing conditions at the I-5 Northbound/"E" Street intersection shows that a reduction of approximately only 5 percent is likely during gate down periods.

In addition, the "saturation flow rate," the parameter which assumes the capacity for the intersection lanes in the peak hour level of service calculation, has been assumed at a conservatively low 1,500 vehicles per lane per hour of green signal time (VPLPH) for turning movements and 1,700 VPLPH for through movements. Urban Systems has conducted saturation flow rate calibration studies at the interchange ramp intersections and has determined that 1,900 VPLPH reflects current traffic conditions and this higher flow rate value should be used. The use of this higher flow rate would result in a calculated intersection capacity increase of approximately twelve percent, more than offsetting the effect of additional trolley vehicles on the south line.

Page 3-180, Third Paragraph

Z155 The statement, "Since it is impossible to accurately predict the duration of future levels of service, the assumption was used in this analysis that LOS "D" at arterial signalized intersections would be of a duration longer than two hours under future project buildout conditions," is critical to determining a significant traffic impact. However, no justification is given for making the assumption that LOS "D" at arterial signalized intersections would be of a duration longer than two hours. No calculations have been provided to show that this is a reasonable assumption. Even in existing congested urban core areas, such as downtown San Diego, the peak hour does not extend beyond two hours so that LOS "D" at intersections is not greater than a two hour duration. Therefore, this assumption seems unreasonable when applied to the midday front intersections.

Z153 Comment noted. The Existing Setting discussion of Section 3.14 of the DEIR text (Volume II) has been revised.

Z154 Comment noted. The Existing Setting discussion of Section 3.14 of the DEIR text (Volume II) has been revised.

Z155 Comment noted. The Impacts discussion of Section 3.14 of the DEIR text (Volume II) has been revised.

Page 3-184, Third Paragraph

Z156 The street segment of "E" Street between I-5 and Woodlawn Avenue is stated to have a volume-to-capacity ratio increase from 0.99 to 1.05. However, this increase is based on the projected average daily traffic volume on this segment of 41,800 ADT, shown in Figure 3-XVII. This volume is higher than that projected by the City of Chula Vista General Plan Traffic Forecast (see Attachment U.S.A. 1), which has only 36,000 ADT for this segment. This General Plan Traffic Forecast, prepared through SANDAG, includes the proposed uses in the midbayfront plus redevelopment in areas outside the midbayfront and should be used for comparison, rather than the 41,800 ADT shown, which is evidently the result of an unreasonable growth estimate.

Page 3-185, Third Paragraph

Z157 This paragraph refers to the redistribution of some traffic from the "E" Street interchange to the "H" Street interchange, and states, "unless traffic were forced to take a route typically used under good conditions, the opportunity to take "E" Street could still remain the preferred choice." However, logic and driver's characteristics, make this a more reasonable assumption than stated here. If the capacity of an intersection is reached, drivers willingly find alternate routes that have remaining capacity and do not require longer driving time than the expected delay. This is a dynamic situation that occurs as a result of driver's intelligence, and they do not need to be forced to make such a diversion. The evaluation prepared by JHK & Associates, by necessity, reflects a static situation based on fixed directional distribution percentages. In reality, the directional distribution will result from driver choices, not a static assumption by traffic engineers.

Z156 The projected average daily traffic volume on this segment of "E" Street between I-5 and Woodlawn Avenue for Year 2000 is 41,800 ADT. This volume level is shown on Figure 3-XVII of the DEIR. It is true that this volume is higher than the volume projected for this segment by the City of Chula Vista General Plan Traffic Forecast, which predicts a build-out volume level of 36,000 ADT for this segment. The General Plan Traffic Forecast, which was prepared by JHK & Associates and SANDAG, includes many of the proposed uses in the Midbayfront area plus redevelopment in areas outside the Midbayfront, and thus predicts an accurate estimate of build-out traffic volume levels on the major transportation facilities of the circulation element. However, the General Plan, Traffic Forecast is also based on a buildup of the circulation element network which calls for the improvement of "H" Street between I-5 and I-805 to six-lane major standards. The build-out traffic forecast prepared for the General Plan thus assigns a greater amount of east-west traffic to the "H" Street facility than to the 4-lane Class I collector facility of "E" Street between I-5 and I-805. It is for this reason that the ten-year planning horizon forecast (Year 2000) which was calculated for this Midbayfront project by JHK estimates a higher interim year volume of 41,800 ADT. Thus, volumes on "E" Street are anticipated to continue to grow as new development and redevelopment occur over the life of the General Plan buildup. However, until the "H" Street corridor is improved to the General Plan recommended standards of six lanes, the "E" Street corridor is anticipated to carry volumes which are higher than those projected in the buildup of the Chula Vista General Plan Circulation Element.

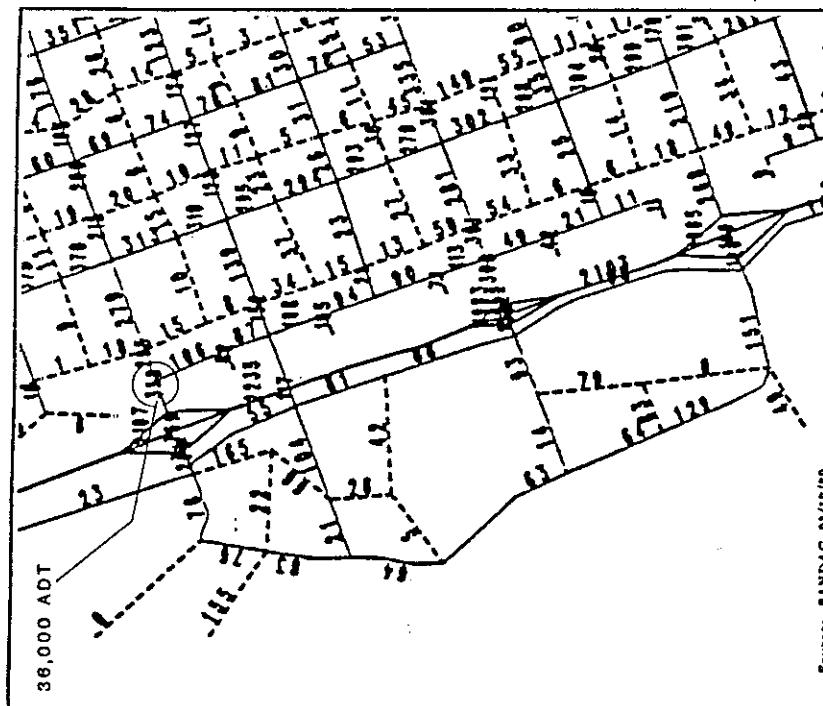
In addition, the volume-to-capacity ratios discussion in Section 3.14 of the EIR has been revised.

Z157 Comment noted. The intersection capacity utilization discussion in Section 3.14 has been revised.

USA 1

ATTACHMENT 1

CHULA VISTA GENERAL PLAN UPDATE
TRAFFIC FORECAST RESULTS & IMPACT



CITY OF CHULA VISTA
BAYFRONT DEVELOPMENT PROJECTS
TRAFFIC REVIEW

Figure 5
NEW BAYFRONT LAND USE
VOLUME ASSIGNMENT - UPDATED
CAPACITY RESTRAINED

jhk & asciutti

CHULA VISTA BAYFRONT
URBAN SYSTEMS

002785F

8/90

Page 3-182, First Paragraph

The reduction in land uses in the revised project (3/26/90 submitted) would result in a reduction of daily trip generation from 41,958 ADT to 39,234 ADT, as shown on the following revised trip generation table. The 2,724 ADT reduction represents a 6.5% reduction in trips.

Z158 This 6.5% reduction in trip generation would result in better levels of service during the P.M. peak hour at the I-5/Marina Parkway/"E" Street ramp intersection, at buildout, than were calculated in the Draft EIR. This reduction, coupled with the recommended improvements stated in the Draft EIR, including widening of Bay Boulevard and the I-5/"E" Street northbound off-ramp for an additional lane, should result in levels of service "D" at the ramp intersections during the P.M. peak hour at buildout.

Page 3-186, Third Paragraph

Z159 This paragraph describing the off-peak (3:00 P.M. to 4:00 P.M.) assignments of future Rohr traffic states that as a result of this reassessment, the P.M. peak hour (4:00 P.M. to 5:00 P.M.) levels of service at the I-5 Southbound/Bay Boulevard and "E" Street intersection is improved to LOS "C", and the I-5 Northbound Ramp/"E" Street intersection improved to LOS "D". It should also state that the off-peak level of service at these intersections was LOS "C" or better and therefore does not support the assumption stated in the third paragraph on page 3-180 that LOS "D" at arterial signalized intersections would be of a duration longer than two hours. Also, the term "potentially significant" has no meaning in this case. It is either "significant" or "not significant".

Table 3-13. Projected Levels of Service (With Redistribution of Trips From the "E" Street Interchange):

Z160 The proposed project P.M. peak hour level of service "D" shown for the I-5 Southbound Ramp/"H" Street intersection should be changed to "C". Attachment U.S.A.2 is the I.C.U. worksheet from the JHK & Associates Chula Vista Bayfront Traffic Impact Analysis of October, 1989, which shows how the eastbound to southbound critical move volume can be reduced by the number of vehicles that will turn right on red simultaneously with the southbound to eastbound left turn movement. A recalculation of level of service with this reduction results in a projected LOS "C".

Z161 Also, the I-5 Southbound Ramp/"J" Street intersection during the proposed project P.M. peak hour should be changed from LOS "D" to "C" as shown in Attachment U.S.A.3, the revised I.C.U. worksheet with right turns on red considered.

- Z158 The Supplemental Traffic Report prepared by JHK (January 1991) specifically analyzes a new Alternative 8 development scenario. This new land use alternative (Alternative 8) generates approximately 38,125 ADT. The 3,833 ADT reduction represents an approximately 9.1 percent reduction in trips from the project site (proposed LCP Resubmittal No. 8 41,958 trips). Thus, the forecasted improvements to projected levels-of-service at the critical signalized intersections in the study area under Alternative 8 would be greater than the projections which were calculated in this comment (which were based on a trip reduction of only 6.5 percent).
- Z159 Comment noted. The intersection capacity utilization discussion in Section 3.14 of the DEIR (Volume II) has been revised.
- Z160 Comment noted. The Transportation/Access section of the Recirculated DEIR includes corrected calculations.
- Z161 See Response Z160.

TRIP GENERATION

| | <u>Unit</u> | <u>Intensity</u> | <u>Trip Rate</u> | <u>Trip Ends</u> |
|--|-------------|------------------|------------------|------------------|
| Residential (R-H) | | | | |
| Apartments - North | Unit | -1,034 | -1,082 6 | -6,210- 6,492 |
| Apartments - Central | Unit | -205 | 3 18 6 | -1,230- 1,908 |
| Apartments - West | Unit | -310 | 0 6 | -1,860- 0 |
| Commercial/Visitor (C-V) | | | | |
| Extended Stay Hotel | Room | 300 | 6 | 1,800 |
| Hotel - Convention | Room | 600 | 8 | 4,800 |
| Hotel - Luxury | Room | -256 | 1 90 8 | -2,000- 1,520 |
| Hotel - Resort | Room | -678 | 4 60 8 | -5,024- 3,680 |
| Motel - Inn | Room | 250 | 9 | 2,250 |
| Tennis | Court | 30 | 30 | 900 |
| Arena | Seat | 5,000 | 0.1 | 500 |
| Health Facilities | KSF | 198 | 10 | 1,980 |
| Commercial/Retail (C-R) | | | | |
| Retail | KSF | 138 | 40 | 5,520 |
| Free Standing Restaurants | KSF | 12 | 40 | 480 |
| Professional/Administrative (C-P) | | | | |
| Office | KSF | 140 | 20 | 2,800 |
| Assembly (Rohr) | KSF | 100 | 4 | 400 |
| Rohr R & D | KSF | 200 | 8 | 1,600 |
| Rohr Administrative HQ | KSF | 200 | 7 | 1,400 |
| Public and Quasi-Public (P-Q) | | | | |
| Greenbelt (SDG&E Corridor) | Acre | 7.6 | 5 | 38 |
| Athletic Facilities | Acre | 8.2 | 5 | 41 |
| Parks and Lagoon | Acre | 32.3 | 50 | 1,625 |
| | | | | -41,958- 39,234 |

| |
|--|
| REDUCTION % = $\frac{41,958 - 39,234}{41,958} = 6.5\%$ |
|--|

SOURCE: JKH & ASSOCIATES,
CHULA VISTA BAYFRONT
TRAFFIC IMPACT
ANALYSIS,
OCTOBER, 1986.

**CHULA VISTA BAYFRONT
URBAN SYSTEMS**

NOTARE

Page 3-188, Last Paragraph

Z162 The significant impact to the capacity of "E" Street from I-5 to Woodlawn Avenue is based on a higher ADT projection than forecast by the Chula Vista General Plan Traffic Forecast, as previously commented on in our reference to page 3-184, Third Paragraph. If the forecast volume is used for this comparison, the impact to this street segment is no greater than existing traffic volumes, due to the diversion of traffic to future SR-54, and should be considered an insignificant impact.

Also, the significant impact stated at the "J" Street and I-5 Southbound Ramp is insignificant if corrected to LOS "C" as referenced in our previous comments for Table 3-13.

Page 3-189, First Paragraph

Z163 The two additional mitigation measures listed here would reduce the P.M. peak hour levels of service to "D" for both the I-5/"E" Street/Marina Parkway intersections if the feasibility of these measures is known. Attachment U.S.A.4 shows the proposed improvements at the I-5 northbound ramp to be feasible by widening the existing ramp approximately 10 ft. to the east and constructing a retaining wall within CALTRANS right-of-way.

Attachment U.S.A.5 shows the feasibility of widening Bay Boulevard to the west, encroaching within the railroad right-of-way, and aligning the lanes across the intersection to the I-5 Southbound Ramp.

Page 3-191

Z164 If our previous comments are incorporated, then this entire analysis needs to be revised:

1. "E" Street between Bay Boulevard and Woodlawn Avenue would not exceed 100 percent capacity if the Chula Vista Bayfront General Plan traffic forecast volume is used (referenced previously in our comment on Page 3-188, Last Paragraph).
2. The "E" Street intersection with Bay Boulevard/I-5 Southbound Ramp is projected at LOS "D" with the feasible mitigation shown of widening Bay Boulevard.
3. The "E" Street intersection with I-5 Northbound Ramp is projected at LOS "D" with the feasible mitigation of widening this ramp for an extra lane within CALTRANS right-of-way.
4. The "J" Street intersection with I-5 Southbound Ramp is shown at LOS "C" as recalculated in Attachment 3 for our comments regarding Table 3-13 (See Attachment U.S.A.3).

Z162 Comment noted. The Mitigation discussion in Section 3.14 of the DEIR (Volume II) has been revised.

Z163 Comment noted. The Mitigation discussion in Section 3.14 of the DEIR (Volume II) has been revised.

Z163 The implementation of these additional measures, if determined feasible by the City of Chula Vista and Caltrans, would reduce traffic impacts to a level considered mitigated and less than significant. At this time, however, the impact is considered significant and not mitigated at the plan level because the feasibility of the proposed mitigation has not been determined and would require approval from Caltrans.

Z164 Comment noted. The Analysis of Significance discussion in the DEIR has been revised.

ATTACHMENT 2

INTERSECTION CAPACITY UTILIZATION MODEL

NS : I-5 SOUTHBOUND RAMP 9/7/89
 EW : H STREET PM PEAK HOUR

Comments: Developer's Proposal

INTERSECTION TURNING MOVEMENTS / LANE GEOMETRY

118 0 772

| | Left Turn | Through | Right Turn |
|------------------|-----------|---------|------------|
| Default Capacity | 1500 | 1700 | 1500 |
| Northbound | 0 | 0 | 0 |
| Southbound | 3000 | 0 | 1500 |
| Eastbound | 0 | 5100 | 1500 |
| Westbound | 1500 | 3400 | 0 |

VOLUME/CAPACITY RATIO

| | Left Turn | Through | Right Turn |
|------------|-----------|---------|------------|
| Northbound | 0.0% | 0.0% | 0.0% |
| Southbound | 25.72 | 0.0% | 10.0% |
| Eastbound | 0.0% | 17.7% | 28.7% |
| Westbound | 32.9% | 10.0% | 0.0% |

SIGNAL PHASING

North/South Left-Through Phasing
 East/West Left-Through Phasing

CAPACITY UTILIZATION

Percent Utilization 87.3%

LEVEL OF SERVICE

Source: JHK & ASSOCIATES
 CHULA VISTA BAYFRONT TRAFFIC
 IMPACT ANALYSIS, OCTOBER, 1989

CHULA VISTA BAYFRONT
 URBAN SYSTEMS

8/90

002785F

ATTACHMENT 3

INTERSECTION CAPACITY UTILIZATION MODEL

NS : I-5 SOUTHBOUND RAMP 9/7/89
 EW : J STREET PM PEAK HOUR

Comments: Developer's Proposal

INTERSECTION TURNING MOVEMENTS / LANE GEOMETRY

271 0 452

| | <--> | 2 | 0 | 1 | 0 | 2 | <--> |
|-----|------|---|---|---|---|---|------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 938 | 0 | 2 | 0 | 1 | 0 | 2 | <--> |
| 506 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

North

LANE GROUP CAPACITY

| | Default Capacity | Left Turn | Through | Right Turn |
|------------|------------------|-----------|---------|------------|
| Northbound | 1500 | 1500 | 1500 | 1500 |
| Southbound | 1500 | 0 | 1500 | 0 |
| Eastbound | 1500 | 0 | 1500 | 0 |
| Westbound | 1500 | 0 | 1500 | 0 |

VOLUME/CAPACITY RATIO

| | Left Turn | Through | Right Turn |
|------------|-----------|---------|------------|
| Northbound | 0.0% | 0.0% | 0.0% |
| Southbound | 25.72 | 0.0% | 10.0% |
| Eastbound | 0.0% | 17.7% | 28.7% |
| Westbound | 32.9% | 10.0% | 0.0% |

SIGNAL PHASING

North/South Left-Through Phasing
 East/West Left-Through Phasing

CAPACITY UTILIZATION

Percent Utilization 80.5%

LEVEL OF SERVICE

Source: JHK & ASSOCIATES
 CHULA VISTA BAYFRONT TRAFFIC
 IMPACT ANALYSIS, OCTOBER, 1989

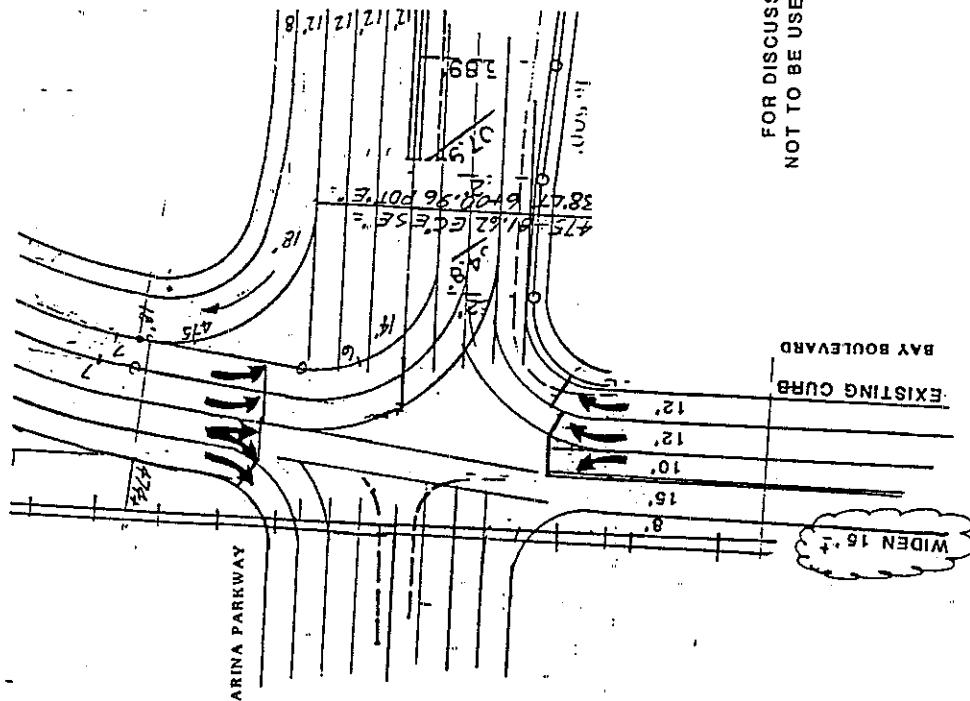
CHULA VISTA BAYFRONT
 URBAN SYSTEMS

8/90

002785F

**BAY BOULEVARD WIDENING CONCEPT
ATTACHMENT 5**

ATTACHMENT 5

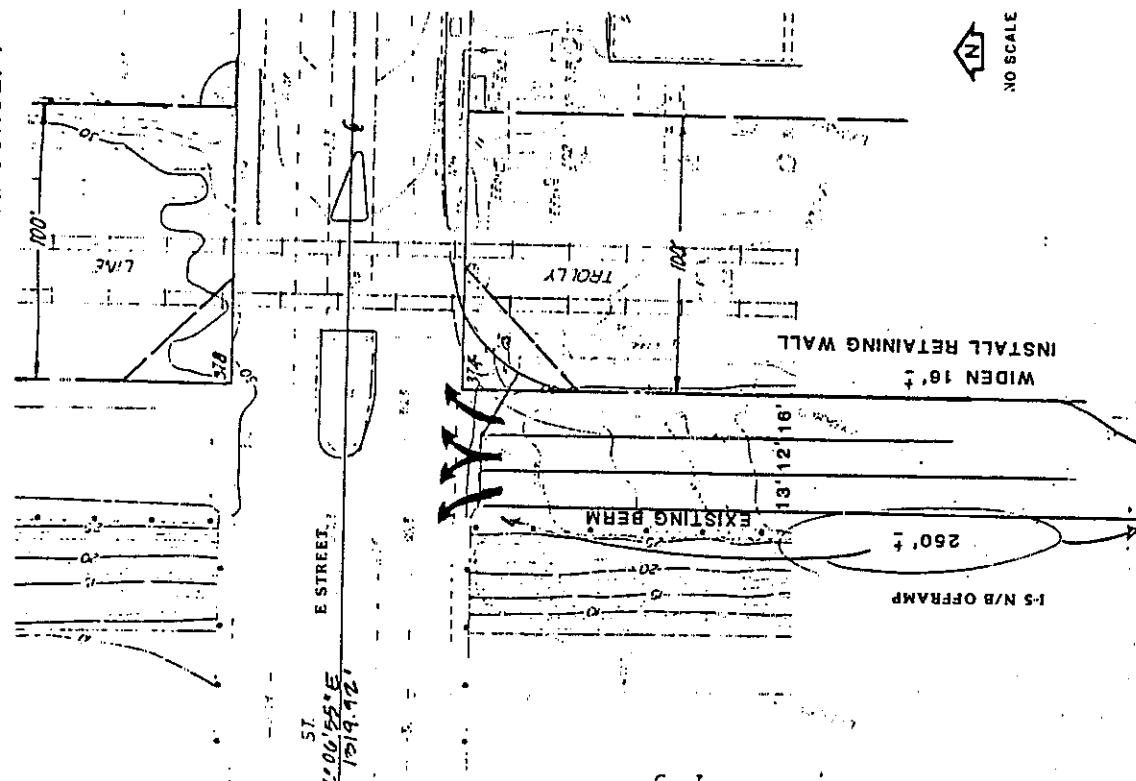


CHULA VISTA BAYFRONT
— URBAN SYSTEMS —

8/90

I-5 NORTHBOUND OFF-RAMP WIDENING CONCEPT

ATTACHMENT 4



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ATTACHMENT B

LIST OF PREPARERS

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ATTACHMENT C

REVISED PROJECT PHASING

| | PHASE I (10 Years 1991 -2000) Main Lagoon | Sq.Ft. Hotels Atrium (600 + 600/25) Extended (300 + 300/25) | Rooms 488,000 244,000 300 | Units 600 300 | Parking Spaces 312 |
|---|---|--|------------------------------------|---------------------|--------------------------|
| Tennis Club/ <u>Training Center</u> Dormitory | | | 137,000 | | |
| | (50 units @ 1 ea) | | | | 50 |
| | Stadium Court | | | | |
| | (2,000 sets @ 1/3.5 sets) | | | | |
| | General Area | | | | 571 |
| | (97,000 @ 2/1,000) | | | | |
| | Residential "A" (1 Br @ 1.5 ea) | | | | |
| | (2 Br @ 2.0 ea) | | | | |
| | | | 324,000 | 215 120 | 323 240 |
| | Residential "E" (1 Br @ 1.5 ea) | | | | |
| | (2 Br @ 2.0 ea) | | | | |
| | | | 308,000 | 164 154 | 246 308 |
| Rohr Industries | | | 305,000 | | |
| Corp. Headquarters | | | | | 809 |
| (245,000 @3.3) | | | | | |
| Credit Union | | | | | |
| (40,000 @3.3) | | | | | |
| | | | | 132 | |
| | (20,000 @5.0) | | | | |
| | | | | 100 | |
| Overlook Park | | | | | 333 |
| "F/G" St. enhancement & Desilting Pond | | | | | |
| Streets - | | | | | |
| Marina Parkway | | | | | |
| "F" Street | | | | | |
| Bay Blvd. | | | | | |
| Gunpowder Point Dr. | | | | | |
| Resurface "E" St. | | | | | |
| Widen W/B "E" St. | | | | | |
| Nature Center Parking | | | | | |

| <u>PHASE I Cont.</u> <u>(1991-2000)</u> | <u>Sq.Ft.</u> | <u>Rooms</u> | <u>Units</u> | <u>Parking Spaces</u> | <u>Rooms</u> | <u>Units</u> | <u>Parking Spaces</u> |
|--|---------------|--------------|--------------|-----------------------|--------------|--------------|-----------------------|
| Interior Street System Retail Center (15/1,000) | 145,000 | | 725 | | | | |
| Co-Generation Plant Conference Center Assembly Area (25,000 General Area (15,000 #2/1,000) | 40,000 | | 500 | | | | |
| SUBTOTAL | 1,991,000 | 900 | 653 | 5,552 | | | |
| | | | | | | | |
| PHASE II - 4 years 2001 - 2004 | | | | | | | |
| Office (60,000 @3.3/1,000) | | | | | 60,000 | | 198 |
| Residential Lagoon | | | | | | | |
| Rohr Industries Corporate Building (115,000 @3.3/1,000) Manufacturing Facility (80,000 @1/800) | | | | | 195,000 | | 380 |
| Athletic Facilities - Ice Rink (5,000 seats @1/3.5 seats) Child Care (7,000 @2/1,000) | | | | | 69,000 | | 1,442 |
| Apartments "D" (1 Br-45x1.5) (2 Br-42x2.0) | | | | | 84,000 | | 87 |
| Retail at Residential Lagoon | | | | | 5,000 | | 14 |
| SUBTOTAL | | | | | 413,000 | | 87 |

| <u>PHASE III (4 years 2005-2009)</u> | <u>Sq.Ft.</u> | <u>Rooms</u> | <u>Units</u> | <u>Parking Spaces</u> |
|--|----------------|--------------|--------------|---------------------------|
| Resort Hotel (460+460/25) | 374,000 | 460 | 479 | |
| Apartments "B" (1 Br-167x1.5) (2 Br- 82x2.0) | 240,000 | | 248 | 251 |
| Widen S/B I-5 Off-ramp @Marina Parkway | | | 164 | |
| Buffer Park (N. of Res. Village) | | | | |
| SDG&E Right-of-Way Improvement | | | | |
| SUBTOTAL | 614,000 | 460 | 248 | 894 |

| <u>PHASE IV (4 years 2009 - 2012)</u> | <u>Sq.Ft.</u> | <u>Rooms</u> | <u>Units</u> | <u>Parking Spaces</u> |
|--|----------------|--------------|--------------|---------------------------|
| Luxury hotel (190+190/25) | | | 190 | 198 |
| Office @ City Site (80,000 @3.3/1,000) | | | | 80,000 |
| SDG&E Right-of-Way Improvement | | | | |
| Apartments "F" (1 Br-96x1.5) (2 Br-18x2.0) | | | 111,000 | 114 |
| SUBTOTAL | 346,000 | 190 | 114 | 642 |

| <u>PHASE V (3 years)</u> <u>2012-2014)</u> | <u>Sq.Ft.</u> | <u>Rooms</u> | <u>Units</u> | <u>Parking Spaces</u> |
|---|---------------|--------------|--------------|---------------------------|
| Apartments "C" (1 Br-218x1.5) (2 Br-80x2.0) | 288,000 | 298 | 327 | 160 |
| Inn (250+250/25) | 204,000 | 250 | 260 | |
| Widen Bay Boulevard | | | | |
| Widen N/B I-5 Off Ramp at "E" Street | | | | |
| SUBTOTAL | 492,000 | 250 | 298 | 747 |
| GRAND TOTAL | 3,856,000 | 1,800 | 1,400 | 10,146 |

Comment AA

Chula Vista Investors

September 26, 1990

City of Chula Vista
276 Fourth Avenue
Chula Vista, Ca. 92010

Re: Chula Vista Investors
Mid-Bayfront LCP
Resubmittal #8

Gentlemen:

As the developer of the Mid-Bayfront area of Chula Vista, we propose significant revisions to the Mid-Bayfront LCP Resubmittal #8 Amendment, which would result in more than four acres of additional parkland and reductions in density, intensity and building heights.

VIA1 The plan changes include reducing the height of several buildings, eliminating residential units in one portion of the project and substantially increasing the parkland.

Among the major changes is the addition of almost four acres of parkland on the south side of the lagoon and at the end of "F" Street. A portion of the new parkland is being made possible by the elimination of previously planned residential condominiums at the end of "F" Street, and the walkway leading to the bay. "F" Street would end at Marina Parkway, adding 3.7 acres of parkland to the already planned activity park on the south side of "F" Street. These changes would create a contiguous 8.2-acre community park beginning south of "F" Street and extending to the lagoon's edge.

On the north side of the lagoon, the luxury hotel will be sealed back adding 0.6 acre to the buffer park. The additional parkland would result in almost 17 acres of parks and open space, including the public lagoon.

Additional changes are being proposed to the luxury hotel that would reduce the height from eight to five stories and decrease the number of units from 250 to 190. The separate resort hotel would also decrease from 26 to 17 stories and from 628 to 460 rooms. The atrium hotel, which was to be 26 stories, would be reduced to 22. The combined reduction in hotel rooms would be 228, bringing the total number of hotel rooms in the project to 1,800.

Changes would also occur to the residential village located in the northeast area of the project. The most significant change is the elimination of all residential units at the end of "F" Street. In addition, the

Comment AA - Chula Vista Investors

AA1 The revisions have been incorporated into the DEIR as Alternative 8; see Section 4.0 of the DEIR, Volume I.

8294639 03/12/91

AA2 Comment noted. See Response Z163.

City of Chula Vista
September 26, 1990
Page Two

residential building furthest north and closest to the nature preserve would be lowered from 17 to nine stories. Originally planned to offer 260 apartments, the building would now house 124. The next residential building to the south would also be lowered in height from 17 to 13 stories, reducing the number of units from 260 to 192.

Because the residential component is so important to the life of the project, some of the unit reductions would be maintained by increasing the height of the low-rise residential buildings in the residential village. The total number of residential units after all changes would be 1,400--a substantial reduction from the original 1,500 proposed.

Changes to the parking facilities in the project are also proposed. The parking originally planned to serve the eliminated residential units at the foot of "F" Street would no longer be needed. Parking required for park visitors will be provided by surface parking. The San Diego Gas & Electric right-of-way would be landscaped and provide additional parking spaces. And, only one level of parking would be needed beneath the tennis courts.

The decrease in density throughout the project would reduce the traffic by 2,724 trips--or about 6.5 percent less than the total traffic projected for the original proposal.

AA2 These reductions, coupled with the recommended improvements in the Draft Environment Impact Report, should result in a level of service "D" at the "E" Street and Interstate 5 ramp intersection during evening peak hours at buildout, instead of the previously projected level of service "E". The improvements include the widening of Bay Boulevard and an additional lane on the Interstate 5 and "E" Street northbound off-ramp.

We are enclosing a blueline plot plan dated September 26, 1990; a revised Project Phasing Plan dated September 26, 1990; and a Summary of Project Revisions.

Very truly yours,

William J. Bartlett

William J. Bartlett

WJB:cj
Encl.

CHOLA VISTA BAYFRONT

REVISED PROJECT PHASING
26 SEPTEMBER 1990

JPI 1658.34

ORIGINAL EXR SUBMISSION
1 AUGUST 1990

PHASE I (10 YEARS/1991-2000)

| PROJECT ELEMENTS: | Sq. Ft. | Hrs | Units | Parking | Sq. Ft. | Hrs | Units | Parking | CHANGE |
|--------------------------------|---------|-----|-------|---------|---------|-----|-------|---------|-----------|
| MAIN LAGOON | 10.0 AC | | | | | | | | |
| HOTELS | | | | | | | | | |
| Atrium (600,600/25) | 486,000 | 600 | 624 | | 486,000 | 600 | 624 | | 0 |
| Extended (300,300/25) | 244,000 | 100 | 312 | | 244,000 | 300 | 312 | | 0 |
| TENNIS CLUB/TRAINING CENTER | 137,000 | | 816 | | 137,000 | | 816 | | 0 |
| Dormitory | | | | | | | | | |
| 150 Units \$1/Unit) | 50 | | | | | | | | |
| Stadium Court | | | | | | | | | |
| 12,000 seats \$1/3.5 Seats) | | | | | | | | | |
| General Area | | | | | | | | | |
| (97,000 \$2/1,000) 195 | | | | | | | | | |
| RESIDENTIAL "A" | 324,000 | | 235 | | 316,000 | | 326 | | +9 Units |
| (1 Br-11x11.5) 323 | | | | | | | | | |
| (2 Br-12x22.0) 240 | | | | | | | | | |
| RESIDENTIAL "E" | | | | | | | | | |
| (1 Br-16x11.5) 246 | 308,000 | | 318 | | 248,500 | | 257 | | +61 Units |
| (2 Br-15x22.0) 308 | | | | | | | | | |
| RETAIL CENTER (5/1,000) | 145,000 | | 725 | | 145,000 | | 725 | | 0 |
| OVERTURE PARK (end of "F" St.) | | | | | | | | | |
| CONFERENCE CENTER | 49,000 | | 530 | | 4,5AC | | 333 | | +3.7AC |
| Assembly Hall | | | | | 40,000 | | 530 | | 0 |
| General Areas | | | | | | | | | |
| (15,000 \$1/1,000) 30 | | | | | | | | | |
| ROHR INDUSTRIES | 305,000 | | 1,041 | | 305,000 | | 1,041 | | 0 |
| Corporate Headquarters | | | | | | | | | |
| (245,000 \$3.3) 809 | | | | | | | | | |
| Credit Union | | | | | | | | | |
| (40,000 \$1.3) 112 | | | | | | | | | |
| VENER POND PARK | | | | | | | | | |
| 7.8AC | | | 48 | | 7.2AC | | 27 | | |

REVISED PROJECT PHASING

26 SEPTEMBER 1990

PROJECT ELEMENTS:

Sq. Ft. Res. Units Parking

STREETS

Marina Parkway
"F" Street
Bay Boulevard
Gunpowder Point Drive
Racetrack "G" Street
Hidden W/B "E" Street
Interior Street System

CO-GENERATION PLANT

"F"- "G" ST. MARSH & RESTORATION

| | | | | | | | | | |
|-----------|-----------|-----|-----|-------|-----------|-----|-----|-------|---------|
| Sub-total | 1,991,000 | 900 | 653 | 5,333 | 1,923,500 | 900 | 583 | 5,358 | +67,500 |
|-----------|-----------|-----|-----|-------|-----------|-----|-----|-------|---------|

ORIGINAL EIR SUBMISSION

1 AUGUST 1990

CHULIA VISTA BAYPORT

JPI 1658.34

REVISED PROJECT PHASING
26 SEPTEMBER 1990

PHASE II (4 YEARS/2001-2004)

PROJECT ELEMENTS:

| | <u>Sq. Ft.</u> | <u>Res.</u> | <u>Units</u> | <u>Parking</u> | <u>Sq. Ft.</u> | <u>Res.</u> | <u>Units</u> | <u>Parking</u> | <u>Change</u> |
|--|------------------|-------------|--------------|----------------|------------------|-------------|--------------|----------------|----------------|
| ATHLETIC FACILITY | 69,000 | | | 1,442 | 69,000 | | | 1,442 | 0 |
| Ice Rink (5,000 seats @1/3.5 seats) | 1,428 | | | | | | | | |
| Child Care | | | | | | | | | |
| (17,000 sq ft./1,000) 14 | | | | | | | | | |
| HORN INDUSTRIES | 195,000 | | | 480 | 195,000 | | | 480 | 0 |
| Corporate Building | 380 | | | | | | | | |
| (115,000 sq ft./3.2,000) 380 | | | | | | | | | |
| Manufacturing Facility | 100 | | | | | | | | |
| (180,000 sq ft./1,800) 100 | | | | | | | | | |
| RESIDENTIAL "D" | 64,000 | | | 67 | 152 | | | 62 | +25 Units |
| (11 B-4A2, 51 B-6 (B-4A2, 0) 64 | | | | | | | | | |
| RETAIL RESIDENTIAL LAGOON | 5,000 | | | 25 | | | | 25 | 0 |
| (15,000 sq ft./1,000) 25 | | | | | | | | | |
| RESIDENTIAL LAGOON | | | | * | | | | | |
| OFFICE | 60,000 | | | 198 | 60,000 | | | 198 | 0 |
| (160,000 sq ft./1,000) 198 | | | | | | | | | |
| Sub-total Phase II | 413,000 | | 87 | 2,297 | 389,000 | | 62 | 2,248 | +24,000 |
| Sub-total Phases I,II | 2,404,000 | | 930 | 7,630 | 2,312,500 | | 615 | 7,646 | +91,500 |

ORIGINAL ZIR SUBMISSION
1 AUGUST 1990

CAPILLA VISTA BAYFRONT

JPI 1658.34

REVISED PROJECT PHASING
26 SEPTEMBER 1990ORIGINAL EIR SUBMISSION
1 AUGUST 1990**PHASE III (4 YEARS/2005-2009)**

| PROJECT ELEMENTS: | Sq. Ft. | Rms | Units | Parking | Sq. Ft. | Rms | Units | Parking | CHANGE |
|----------------------------------|-----------|-------|-------|---------|-----------|-------|-------|---------|----------|
| RESORT HOTEL (160x40/25) | 374,000 | 460 | | 479 | 510,000 | 628 | | 653 | -168 rms |
| RESIDENTIAL "B" | 240,000 | | 248 | 415 | 297,000 | | 307 | 510 | +59 rms |
| (1 Br- 16'x11.5) 231 | | | | | | | | | |
| (2 Br- 8'2x2.0) 164 | | | | | | | | | |
| BUFFER PARK (N. of Res. Village) | 7.2AC | | 10 | | 7.2AC | | 0 | 0 | |
| WIDEN S/B I-5 OFFRAMP | | | | | | | | | |
| MARINA PARKWAY | | | | | | | | | |
| SDCIE ROW IMPROVEMENT | | | | | | | | | |
| Sub-total Phase III | 614,000 | 450 | 248 | 914 | 667,000 | 628 | 307 | 1,163 | -133,000 |
| Sub-total Phase I,I.I,I.III | 3,018,000 | 1,260 | 988 | 8,544 | 3,118,500 | 1,528 | 952 | 8,809 | +161,500 |

JPI 1658.34

CIVILA VISTA BAYFRONT

REVISED PROJECT PENDING
26 SEPTEMBER 1990

ORIGINAL ZIR SUBMISSION
1 AUGUST 1990

| PHASE IV (4 YEARS/2009-2012) | | | | | | | | | | | |
|---|-----------|-------|---------|---------|-----------|---------|-----------|-------|----------|--------|--|
| PROJECT ELEMENTS | Sq.Ft. | Units | Parking | Sq.Ft. | Units | Parking | Sq.Ft. | Units | Parking | CHANGE | |
| LUXURY HOTEL (1190+190/15) | 155,000 | 190 | 198 | 204,000 | 250 | 260 | -60 Rms | | | | |
| RESIDENTIAL 15' ² (1 BR-9'x15' 144 (2 BR-10'x2.0) 36 | 111,000 | 114 | 180 | 125,000 | 129 | 215 | -15 Units | | | | |
| COMMERCIAL & CITY SITE (80,000 \$3,571,000) 264 | 80,000 | 264 | 80,000 | 264 | 264 | 0 | | | | | |
| SITE ROW IMPROVEMENT | | 0 | | | | 41 | | | | | |
| BUFFER PARK PARKING | | 0 | | | | | | | | | |
| Sub-total Phases I-III | 346,000 | 190 | 114 | 642 | 409,000 | 250 | 129 | 780 | -61,000 | | |
| Sub-total Phases I-IV | 3,364,000 | 1,550 | 1,102 | 9,186 | 3,528,500 | 1,778 | 1,081 | 9,589 | -164,500 | | |

CENTLA VISTA BAYFRONT

JPI 1658.34

REVISED PROJECT PHASING
26 SEPTEMBER 1990

ORIGINAL PIR SUBMISSION
1 AUGUST 1990

PHASE V (3 YEARS/2012-2014)

| PROJECT ELEMENTS | Sq. Ft. | Res. | Units | Parking | \$s. Fc. | Res. | Units | Parking | CHANGE |
|--|-----------|-------|-------|---------|-----------|-------|-------|---------|------------------|
| RESIDENTIAL "C" (1 BR-1Bd1.5) 327 (2 BR- 8022.0) 166 | 285,000 | 296 | 487 | | 380,000 | 393 | 652 | | -95 Units* |
| INN (120-250/75) 260 | 204,000 | 250 | 260 | | 204,000 | 250 | 260 | 0 | |
| WIDEN BAY BLVD. WIDEN N/A I-5 OFFRAMP E STREET | | | | | | | | | |
| RESIDENTIAL "C" @ END OF "P" ST. | | | | | 73,500 | | 76 | 114 | -76 Units |
| Sub-total Phase V | 492,000 | 250 | 296 | 747 | 657,500 | 250 | 469 | 1,026 | -165,500 |
| Total Phases I,II,III IV,V | 3,856,000 | 1,800 | 1,400 | 9,933 | 4,186,000 | 2,028 | 1,550 | 10,615 | -330,000 (-7.9%) |
| Total Parks | 23.2AC | | | | 18.9AC | | | | +4.3AC |
| Total Park Parking | | | 188 | | | | 428 | | -240 Spaces |

Comment BB

PAUL A. PETERSON
GREGORY C. M. GARRATT
EDWARD F. WHITTLER
LYNNIE L. HEIDEL
REBECCA MICHAEL
MARSHAL A. SCARR
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530 B STREET, SUITE 2300
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—
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September 26, 1990

FILE NO.
3848.001

Comment BB - Peterson & Price

BB1 These comments are noted.

BB2 See Response Z3.

City of Chula Vista
276 Fourth Avenue
Chula Vista, California 92010

Re: City of Chula Vista
Mid-Bayfront LCP I
Resubmittal #8 Amendment
Comments on Draft Environmental
Impact Report

Gentlemen:

We are the attorneys for Chula Vista Investors (CVI), and
wish to make some general comments concerning the Draft
Environmental Impact Report (DEIR).

BB1 i. We believe the DEIR is legally adequate.

2. We feel that the numerous mitigation measures and major
environmental benefits contained in CVI's Mid-Bayfront project,
including a comprehensive Habitat Restoration and Management
Program, all of which are worth millions of dollars, have been
severely downplayed and understated.

3. In many instances, the DEIR seems to be biased against
the CVI project, or lacks objectivity, as demonstrated by:

BB2 a. DEIR ignores LCPR No. 8's Environmental Management
provisions and commitments to prevent or mitigate
impacts.

City of Chula Vista
September 26, 1990
Page 2

BB3 See Responses Z3 and Z8.

BB4 See Response Z16. Summary tables and text have been modified, where appropriate, in Volume II, Tables 1-1-A and 1-2, and in the Volume II text to reflect additional pertinent information provided subsequent to the publication of the August 1, 1990 DEIR.

- BB3 b. DEIR overstates severity of various biological impacts, including increased freshwater input, contaminant discharge, sediment accretion and erosion, and impacts on mudflats and eelgrass.
- BB4 c. DEIR overstates severity of many physical impacts (geology/soils/hydrology/groundwater, by their wholesale designation as Significant and Unmitigable).
- BB5 d. DEIR ignores the far less restrictive conclusions reached in the 1985-86 Final EIR for the Mid-Bayfront certified LCP project, even though project included major direct impacts on biological resources at "D" Street Fill and Gunpowder Point.

The DEIR's bias is demonstrated by the following:

- BB6 a. The DEIR evaluation does not take into account the LCPR's Environmental Management Section's detailed provisions and commitments to prevent or mitigate potential impacts.

Specifically, several key sections of the DEIR Impact Analysis ignore the environmentally protective policies and design provisions called out in LCPR No. 8's Land Use Plan (at pages II-88 through 102), even though these are vital to an objective assessment of the potential impacts of the CVI's proposed project. The LCPR No. 8's "Specific Development Policies" and "Development Standards" establish explicit design provisions and requirements for the precise purpose of preventing

and/or mitigating most of the potential environmental impacts considered in the DEIR.

BB7 These provisions focus on a) preventing or mitigating various types of biological impacts, and b) committing to a series of restoration and enhancement measures to upgrade the quality of wildlife habitat in currently degraded areas of the National Wildlife Refuge.

BB8 The DEIR impact analysis also does not take into account the various environmentally protective requirements specified in Special Conditions 1 through 13 incorporated in the Corps of Engineers Section 404 Permit #88-167-R18 for the CVI project.

This lack of acknowledgement and utilization in the Impact Analysis is difficult to understand because LCPN No. 8 and the Corps Permit are both specifically cited in Sections 1 and 2 of the DEIR.

BB9 b. The DEIR overstates the severity of several types of biological impacts.

As a result of not taking into account: i) the LCPN No. 8 Environmental Management provisions and commitments by CVI and ii) the Corps Permit Special Conditions to which CVI has agreed, the DEIR analysis of potential impacts on biological resources presents, a marked overstatement of the anticipated severity of a number of the impacts identified. Potential impacts for which severity has been overstated include:

BB7 Comment noted. See Response Z3.

BB8 See Response Z3.

BB9 See Responses Z3 and Z8.

- a. Increased fresh water input. BB10
See Responses Z3 and Z8.
- b. Sediment accretion and erosion. BB11
See Response Z16.
- c. Contaminant discharges.
- d. Impacts on mudflats and eelgrass beds.

This overstatement of severity is particularly difficult to understand in that the LCPR mitigation measures and Habitat Restoration and Management Program for the F/G Street Marsh were discussed at length at a June 15, 1990 meeting with the City staff and the EIR consultant, as well as on several subsequent occasions prior to the consultant's completion of the DEIR.

c. The DEIR overstates the severity of many physical impacts by concluding they are Significant and Unmitigable in contradiction to the information and discussion presented in the preceding text.

BB11 The DEIR impact analysis for geology/soils/groundwater and for hydrology/water quality presents a detailed series of feasible mitigation measures to reduce the various potential impacts identified to a level of minimal significance. The DEIR then contradicts itself by stating that the impacts must be considered Significant and Unmitigable, because not enough detailed technical information is available at this time to judge otherwise.

- BB12 d. The DEIR seemingly ignores the far less restrictive conclusions regarding biological impacts reached in the 1985-86 Final EIR's for the Mid-Bayfront certified LCP project, even though that project included major direct impacts on biological resources at the D-Street Fill and at Gunpowder Point.

By not taking into account (and failing to make specific comparisons with) the impact analysis discussions and conclusions re biological resources reached in the 1985-86 Final EIR's, the LCPR No. 8 DEIR paints an unfair picture of environmentally adverse impacts for the CVI-project, impacts which, by implication, are judged to be substantially more severe than those for the 1985-86 project.

The conclusions reached in the LCPR No. 8 DEIR concerning the level of significance of impacts on biological resources were compared with the equivalent analysis and conclusions in: a) the Final Environmental Impact Report for the Bayfront Specific Plan (City of Chula Vista EIR 85-1) dated January 3, 1985; and b) the Final Supplemental Environmental Impact Report for Amendments to the Chula Vista Bayfront Specific Plan (City of Chula Vista EIR-86-1) dated September 9, 1986.

In short, neither the 1985 nor the 1986 FEIR found significant unmitigable impacts on biological resources. This finding is in marked contrast to the interpretations and judgments re biological impacts presented in the LCPR No. 8 DEIR.

This contrast is of major significance in evaluating the objectivity of the LCPR No. 8 DEIR because the Land Use Plan

BB12 See Responses Z70 and Z71.

addressed in the 1985 and 1986 FEIR's included:

- a. A hotel of up to 12 stories located on a 14-acre parcel on Gunpowder Point;
- b. Two marinas located on the D-Street Fill; and
- c. Two marina-related buildings (up to five stories) located near the marinas on the D-Street fill.

It is clear that because of their location, the hotel, marinas, and marina-related buildings of the Bayfront Specific Plan would have had substantially more impact on biological resources than the LCPR No. 8 CVI Mid-Bayfront project, which would utilize only the more remotely located, degraded uplands portion of the former Bayfront Specific Plan. In addition, virtually all the mitigation measures offered as part of the 1985/86 Plan (or their equivalent) have been incorporated in the CVI project. Further, CVI has offered additional restoration of degraded wetlands and wildlife habitat on Gunpowder Point and the D-Street Fill, as stated in a preceding comment.

BB13

In view of the marked difference in the judgments reached in the present DEIR and the judgments in the 1985/86 FEIR's regarding the level of significance and degree of mitigability for several equivalent types of biological impacts, questions arise as to the objectivity of the LCPR No. 8 DEIR analysis.

BB14

4. The DEIR evaluates LCPR No. 8 and the CVI project as if both exist in a vacuum. In this context, the DEIR largely ignores:

BB13 See Response Z70.

BB14 See Responses Z3 and Z9.

- a. The Redevelopment Agency's more than ten years of planning efforts and negotiations toward redevelopment of the Chula Vista Bayfront;
 - b. The significance of the litigation re the Bayfront LCP and the resulting Settlement Agreement;
 - c. The donation of 315 acres of private property to allow creation of the Sweetwater Marsh National Wildlife Refuge so as to guarantee protection of virtually all wetland and related wildlife resources in the Bayfront area; and
 - d. The resulting entitlement for development of the remaining 135 acres of Mid-Bayfront uplands.
- BB15** 5. The DEIR's continued use of the certified LCP project as the reference standard for density and height comparisons with CVI Mid-Bayfront project is misleading and unreasonable. The CVI project should be judged on its own merits in this regard.
- BB16** 6. The DEIR concludes that the potential impacts for a wide range of physical factors (geology, soils, hydrology, groundwater, and water quality) are "Significant and Unmitigable" on the basis that detailed design information has not yet been completed at this Plan Level phase of the project. This information routinely becomes available during the subsequent Project Level phase. Normally, such matters are handled as "conditions of approval," and the impacts are labeled "significant, but mitigable."

Comment CC

VERBATIM TRANSCRIPT OF PUBLIC HEARING - PLANNING COMMISSION MEETING OF 9/26/90 RE: MID-BAYFRONT LCP RESUBMITTAL #8 AMENDMENT

Comment CC - Peter Watry - Crossroads

Madam Chairman, Members of the Commission, my name is PETER WATRY. I live at 81 Second Avenue and tonight I'm speaking on behalf of CROSSROADS. First of all, we'd like to compliment the EIR. We were very impressed by this EIR. To most of us who have read EIRs over the years, this is the best one we've seen in terms of trying to analyze where the (course?) is a very complicated and large project. There were many fine points that should be emphasized. For instance, at one point it says a cumulative of the proposed structures will form a solid urban mass that will eliminate current view of the SD&E power line, I-5, and the City of Chula Vista. Again, the visual impacts from KOP #3 are considered to be significant since almost all bay views will be eliminated. Again, the high density of the proposed buildings will create an urban wall from this location. And, again, mitigation measures to reduce the impacts on the City of Chula Vista waterfront image and community identity entailed a redesign of the project to reduce building heights and density. And, again, while the project itself will have an incremental impact, the increase of traffic around the project site may create look-alike violations of ambient health standards. And, again, the intensity of the land uses is, however, out of scale with the surrounding area. And a particular observation of the EIR writer that we were pleased was there says the existing LCP went through exhaustive public and Agency review before its certification resulting in a plan that attained most public and Agency acceptance. And, again, the intensity of the urban land use proposed in mid-Bayfront is not considered compatible with the unique and protected open space uses of the adjacent Sweetwater Marsh National Wildlife Refuge and the Chula Vista Nature Interpretive Center. And, again, the only inter...mitigation measure possible to reduce the impacts of the land use intensity incompatibility and the incompatibility with the adjacent National Wildlife Refuge to below a level of significance would be to redesign the proposed project and to reduce density alternatives.

And, again, the delay of building the majority of public parks parking until the year 2009 to 2011 and the absence of identification of when parks will be built constitute potentially significant impacts to accessibility to parks. And, again, the Levels of Service F, E, and D would occur at "E" Street intersection of the Bay Boulevard/I-5 south ramp, Level of Service F; at "E" Street intersection of the Bay Boulevard/I-5 northbound, Level of Service E; "J" Street intersection at I-5 southbound ramp, Level of Service D. We are also, on the more positive side, very much impressed with the comments of the EIR about alternative no. 7 and some of the comments of the EIR writer. For instance, the design--no. 7--to reduce the overall density to a level allowed by the existing LCP. Again, in comparison with the proposed project, alternative 7 will result in a significantly reduced impacts to bayside views and to the community character. And, again, most importantly, however, this alternative would ultimately provide greater on-site opportunities to the public to enjoy the aesthetic amenities of the City's bayside setting. In comparison with the proposed project, alternative 7 provides for more public park lands along the Bay as well as an increased potential for easy access to and park the bayfront. And, again, with respect to cumulative visual effects, alternative 7 would create a multi-use development that would not contrast significantly in urban scale or community character with other bayside developments in South San Diego metropolitan area, etc. So we were just very impressed with this EIR. Madam Chairman, we do have three suggestions for changes or improvements. One of them is, there are several tables throughout the body of the EIR that lists, for instance, about building heights that lists all five alternatives in a table. We would ask that you would ask that alternative 7 be added to those tables so you can see the full spectrum of the choices when you come to the...there are several like that. Also, we would ask that alternative 7--there is a--one of the outstanding features of this EIR--the first we've ever seen

- CC1 These comments are noted.
- CC2 We recognize the impact that future Year 2000 intersection levels-of-service could have on accessibility to the parks in the bayfront area. In addition to intersection levels-of-service, a projection of future Year 2000 arterial LOS was included in the Draft EIR. Also, see revised Analysis of Significance portion of the Transportation/Access section of the DEIR. This section provides details regarding traffic congestion impacts of the proposed project.
- CC3 Alternative 7 has been added to Tables 3-1 and 3-9, and was previously included in Tables i-1 and 2-1. Alternative 7 is the same as Alternative 5 in the traffic tables.

CC4 of it--are these visual impact pictures--what do you call them, a plate, they call them plates. We would ask that alternative 7 also be added to those visual impact plates. That would be very useful in making decisions at a later point. No. 2, we would ask that you correct what you've just been talking about. In the section on traffic, it says what are the conditions now and then it goes through the whole analysis of what it's going to be after the project and so forth. In the first table where it says the conditions now, at "E" Street, it says no conditions worse than A, B, or C. Now, you know that's wrong. And the reason it's wrong is because they use the ICU method, and the ICU method is a trait--the theoretical method where you take the configuration of the street, how many lanes you've got, and so forth, and how much traffic it ought to handle and then how much is actually there, and that's how you get your level of service. Under ordinary circumstances, that's okay as an estimate. Of course, at "E" Street, that's not ordinary. They've got the trolley gate you were just talking about. Those are obviously not C level services. I've been backed up behind Woodlawn where I couldn't get through the intersection signal through a whole signal change. And so the trouble is they're using the wrong method. The ICU method does not apply at that intersection. As you all know, you've been briefed by the Engineering Department; they have another method of measuring traffic that measures the actual delay, the average delay of vehicles going across a certain point. And some time ago you heard the engineers tell you about that system. I urge you to ask that that one intersection that they use that other method. I think it's called HCM, or something. They can tell you. Anyway, it's got a name to it--I forgot what it is. But is measures the actual delay of how long the actual delay is of cars going through. Now that would give you an accurate measurement of what the conditions are at this point. And, I think--you ought to record that at that point. The third thing I ask is most important. It concerns water. This EIR is completely silent on the impact on the community of--in terms of water. So with your permission, I'd like to use a transparency. Madam Chairman, the EIR does speak to--quite a bit about plumbing--the 12" mains and some other things. That's not the part we're interested in. We're interested in that middle paragraph where it talks about the availability of water. And so that one paragraph says on that one subject says while the size of development would greatly add to the area demand for water, the Sweetwater Authority has determined that it can provide adequate amounts of water to the project site if analysis recommendations are followed. Well, of course that's true. They're a public utility. They have to. The question that should have been asked is, what's the impact on the rest of us? On the rest of the community of that providing service. And that's the answer that wasn't (unclear). Do the rest of us have to have brown lawns to have this project. I'd like show you the kind of analysis that should have been done. There are water generation factors just like there are traffic generation factors and so forth. So using those generation factors, the 1500 residential units would use 312 acre feet per year of water under standard--assuming they are full and under standard uses. The 2,000 hotel rooms would use 226 acre feet, and the 30 acres of park would use another 15 acre feet of water per year. That's a total of 553 acre feet of water per year. Now in the last four or five years, the Sweetwater Authority has been averaging 26,000 acre feet of water--they call that water production, and that's a combination of aqueduct water and their local sources--of course, mostly aqueduct. So they've been averaging 26,000 acre feet per year the last four or five years. So as you can see, the amount that this--those numbers would use is 2.1% of the Sweetwater Authority's annual water production.

So that's the impact--not the impact--that's the significance of the amount of water that a development like this would use. In addition to the ones I just listed, the ones I did not get the figures for--the convention center, the tennis court and athletic facilities, and restaurants, and retail outlets--I don't think those would add too much,

CC4 Alternative 7 was already shown on the plates; please see the end of Section 4.0 of the DEIR, Volume II.

CC5 Based on the comment regarding the limitations of the ICU method and a thorough review of the Draft EIR by the City of Chula Vista, the following action has been taken:

1. October 1990 - The City of Chula Vista requested that JHK & Associates (JHK) submit a scope of work to perform an analysis of critical signalized intersections on "E," "H," and "J" Streets using the "Operational Analysis" method from the 1985 Highway Capacity Manual (HCM). This method is based on average delay per vehicle in seconds and will enable JHK to account for the negative impact that the trolley has on traffic operations by reducing the amount of available capacity. These critical intersections are those locations which would be most directly impacted by the delay caused by the trolley gate down time.

2. November 1990 - Based on the approval of the JHK scope of work, the City authorized JHK to conduct the study to predict future levels-of-service at critical signalized intersections using the HCM method.
3. February-March 1991 - The results of this special capacity analysis are documented in a Supplemental Traffic Report prepared by JHK (Appendix H - Section II). Conclusions and recommendations from this report are summarized in the Draft EIR.

CC6 The basic water supply issue in southern California is, as the comment stated, one of demand becoming increasingly greater than supply. This situation will be exacerbated as Arizona takes more water which is legally committed to that basin. Also, as the comment suggested, Sweetwater Authority is a member of the San Diego County Water Authority (SDCWA) which is a member of the Metropolitan Water District (MWD). Thus, decisions made by either the SDCWA and/or the MWD could affect the supply received by the Sweetwater Authority. To further complicate matters, southern California, as well as other parts of the West and Southwest are experiencing a drought. Thus, the average annual water supply of MWD and SDCWA potentially is subject to even greater cutbacks. The most difficult part of water planning is the variability of nature, and the resultant variability in potential decisions regarding water use. The existing situation could continue fairly status quo for an indefinite period, or further water rationing (beyond the existing "Stage 2 Mandatory Compliance Water Alert") could occur.

The proposed project's impact on Sweetwater Authority's supply is shown below.

SP-0404 03/29/91

but I didn't have time to get those figures. But, it's a fair guess that this project will use about 2-1/2% of Sweetwater Authority's water. My question is, what does that mean to the rest of us? These are Sweetwater Authority's water conservation program and these are various stages that you know about. Right now, we're at stage 2 as you know. Now, the question is, first let me assume--let's assume that overnight they built that entire project overnight, so that by tomorrow morning that entire project is going. What affect would that have on our community. What affect would a 2-1/2% increase in demand for water have in our area? That's a hard question to ask--you should ask an expert--but, my judgment is, that increase in use of that much water tomorrow morning would mean that we'd all go to stage 3. So that's the kind of impact the EIR should have done--go to stage 3. And stage 3 is just a more severe case of what we're doing now. You can only water certain days of the week; you can't wash cars, and so forth. Now, of course, you're not going to do it overnight, so the question might be, then, when they finally build this thing out and what happens when we get back to normal? Now before I'll answer that, least my judgment--but before we do that, I think that you as a Planning Commission shouldn't assume that we're going to get back to normal--that we'll never get back to where we were five years ago in terms of water. All the points I possibly know about all point to the opposite direction. There are some wide world problems like global warming and that's very controversial, but that can't help the water situation. You know the rain forest continue to be cut down unabated. You may have seen the program the other day that the average temperature in Phoenix is rising slightly every year. Those are all kinda worldwide things that do not point toward more water for us. More specifically, as you may know, as of 1985, Arizona is entitled to half the water that California has been using for the last 50 years. The last figure I heard is they have taken 30% of that. So they've still got 70% more to go. So before this decade is out, Arizona will take the rest of all that water, and so we know that's going to happen. We also know that Northern California is not going to let us have anymore water. And that's a known fact. We also know--this one you may not know--is that the last several years--many years that the San Diego--we belong to the Metropolitan Water District in Southern California. The San Diego County Water Authority has been using more than their legal allotment for many, many years. And they've been able to do that because the City of Los Angeles uses less than their share, and they do that because they've got their own aqueduct in (unclear) Valley. And you probably also know that court case after court case after court case has gone against Los Angeles. And they're making Los Angeles not only stop draining Mono(?) Lake; they're making them let it fill back up again. And so last September, a year ago, the State of California voted the money to give to Los Angeles to buy water from the Metropolitan Water District. They are replacing the water they are losing by their aqueduct; they're replacing it by from the Metropolitan Water District and they're entitled to it. It's their share. This next item is unofficial. It's a rumor. So I'll tell it to you. The San Diego County Water Authority is preparing a suit to sue L.A. and to sue the Metropolitan Water District that says in effect, L.A. can't have their rightful water. So, that's was a deal we made 50 years ago, that it was entitled to so much water. If L.A. really uses their entitlement, then San Diego will have a lot less. And so we're trying to sue them--we're going to sue them that they can't do that. And so the courts will have to decide that. But, anyway, all the things point toward we will never get back to normal. I don't know if any indicator that says we will get back to normal. But, assume we did. Assume we did get back to normal. What affect would this 2-1/2% of water use? In my opinion, that would put us all on at least level 1 on a permanent basis. Now, don't actually accept my figures. I do urge you to ask the EIR people. They should do an analysis like I've done. And I just got these numbers by calling water companies. Anybody can do it, and it should be

| | | | Projected Consumption |
|--|------------------------|--|---|
| Proposed Use | Generation Rate | Units | |
| Residential (high density) | 110 gallons/capita/day | 1,550 (2790 people) | 306,900 gal/day = 346 acre-feet/year |
| Hotel | 8.0 acre feet/year | 2038 totaling 1,650,00 s.f. (37.87 acres) | 303 acre-feet/year |
| Commercial (Retail and Office) | 1.5 acre-feet/year | 790,000 s.f. (18.13 acres) | 27 acre-feet/year |
| Public/Quasi-Public (including parks) | 2.0 acre-feet/year | 26.5 acres | 53 acre-feet/year |
| TOTAL CONSUMPTION | | | 729 acre-feet/year |

Source: Sweetwater Authority

Based on these calculations, and the amount of water Sweetwater Authority receives from SDCWA (approximately 26,000 acre-feet/year), the project would represent approximately 2.8 percent of the Sweetwater Authority's past and present allotment. If this allotment were reduced due to the factors described earlier, then the project would represent a greater percentage.

Any additional demands on a supply which is currently considered inadequate (one which warrants mandatory conservation for the existing demand) represents an incremental contribution to a cumulatively significant impact on the Sweetwater Authority's ability to supply the existing and future demand of their District. To mitigate this incremental impact, the applicant must provide water conservation measures at the project level design, including such elements as low flow showers, low flush toilets, timed irrigation, landscaping with drought-tolerant species, drip irrigation where appropriate and development of reclaimed water lines for future use. (This information has been added to the FEIR, Volume II, Section 3.13).

done. It's an important consideration of what would be the impact of this development on the City of Chula Vista in terms of water impact. That should have been in the EIR. Water is now a controversial issue. Thank you.

Comment DD

STATE OF CALIFORNIA—OFFICE OF THE GOVERNOR

OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814

Sep 20, 1990

DOUG REID
CHULA VISTA CITY
276 4TH AVE
CHULA VISTA, CA 92101

Subject: PROPOSED LOCAL COASTAL PROGRAM RESUBMITTAL #8
SCH # 89062807

Dear DOUG REID:

The State Clearinghouse has submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is now closed and the comments from the responding agency(ies) is(are) enclosed. On the enclosed Notice of Completion form you will note that the Clearinghouse has checked the agencies that have commented. Please review the Notice of Completion to ensure that your comment package is complete. If the comment package is not in order, please notify the State Clearinghouse immediately. Remember to refer to the project's eight-digit State Clearinghouse number so that we may respond promptly.

Please note that Section 21104 of the California Public Resources Code required that:

"a responsible agency or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency."

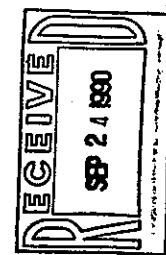
Commenting agencies are also required by this section to support their comments with specific documentation. These comments are forwarded for your use in preparing your final EIR. Should you need more information or clarification, we recommend that you contact the commenting agency(ies).

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact Terri Lovelady at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

David C. Nunenkamp
Deputy Director, Permit Assistance
Enclosures

cc: Resources Agency



GEORGE DEUKMEJIAN, Governor

| | | | |
|---|---|----------------|-----------------|
| Sub to State Clearinghouse: 1400 Tenino Street Sacramento, CA 95814 916-445-0613 | SCH # 891652802 | | |
| Project Title: Chula Vista Midbayfront Local Coastal Program Resubmittal | | | |
| Land Agency: City of Chula Vista | Coastal Services | | |
| State Address: 216 Fourth Avenue | Phone: 691-5120 | | |
| City: Chula Vista | County: San Diego | | |
| Project Location | | | |
| Owner: San Diego | City/Nearby Community: Chula Vista | | |
| Address/Patch No.: E Street/Bay Boulevard | Tax Area: Midbayfront T35 | | |
| When 2 Miles: Tax Hwy #: 5 | Section: _____ | Topo: _____ | Range: _____ |
| Airport: _____ | Railway: SD & IV | Railway: _____ | School: Eastier |
| Document Type | | | |
| CPOA: <input type="checkbox"/> CHPD: <input type="checkbox"/> Supplements/Appendixes: <input type="checkbox"/> | NEPA: <input type="checkbox"/> NOI: <input type="checkbox"/> Other: <input type="checkbox"/> Final Document | | |
| DRCP: <input type="checkbox"/> DCP: <input type="checkbox"/> EIS (Per CPOA): <input type="checkbox"/> Public: <input type="checkbox"/> Environmental Appendices: <input type="checkbox"/> Zoning: <input type="checkbox"/> Other: <input type="checkbox"/> | Propane: <input type="checkbox"/> Radiation: <input type="checkbox"/> Air Quality: <input type="checkbox"/> General Response: <input type="checkbox"/> Coastal Permit: <input type="checkbox"/> | | |
| General Plan Update: <input type="checkbox"/> General Plan Amendment: <input type="checkbox"/> Specific Plan: <input type="checkbox"/> Radioactive: <input type="checkbox"/> | Master Plan: <input type="checkbox"/> Pipeline: <input type="checkbox"/> Land Division (Subdivision): <input type="checkbox"/> | | |
| Community Plan: <input type="checkbox"/> City Plan: <input type="checkbox"/> Master Plan Development: <input type="checkbox"/> Pesticides: <input type="checkbox"/> | Use Permits: <input type="checkbox"/> Landfill: <input type="checkbox"/> Public: <input type="checkbox"/> | | |
| Other: <input type="checkbox"/> Site Plan: <input type="checkbox"/> Other: <input type="checkbox"/> | Permit/Hab. Tree/Hab. Hgt. <input type="checkbox"/> | | |
| Local Action Type | | | |
| General Plan Update: <input type="checkbox"/> General Plan Amendment: <input type="checkbox"/> Specific Plan: <input type="checkbox"/> Radiation: <input type="checkbox"/> | Planning: <input type="checkbox"/> Protection: <input type="checkbox"/> Landfill: <input type="checkbox"/> | | |
| Community Plan: <input type="checkbox"/> City Plan: <input type="checkbox"/> Master Plan Development: <input type="checkbox"/> Pipeline: <input type="checkbox"/> | Transportation: <input type="checkbox"/> Public: <input type="checkbox"/> Public: <input type="checkbox"/> | | |
| Other: <input type="checkbox"/> Site Plan: <input type="checkbox"/> Other: <input type="checkbox"/> | Industrial: <input type="checkbox"/> Residential: <input type="checkbox"/> Public: <input type="checkbox"/> | | |
| Development Type | | | |
| Residential: Use: 1,550 Acres: <input type="checkbox"/> Office: 1,650,000 Square Feet: <input type="checkbox"/> Industrial: Use: 1,550 Acres: <input type="checkbox"/> Commercial: Use: 1,550 Acres: <input type="checkbox"/> Institutional: Use: 1,550 Acres: <input type="checkbox"/> Residential: Use: 1,550 Acres: <input type="checkbox"/> | Employee: Unknown: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> | | |
| Commercial: Use: 1,550 Acres: <input type="checkbox"/> Industrial: Use: 1,550 Acres: <input type="checkbox"/> Institutional: Use: 1,550 Acres: <input type="checkbox"/> Residential: Use: 1,550 Acres: <input type="checkbox"/> | Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> | | |
| Office: 1,650,000 Square Feet: <input type="checkbox"/> Industrial: Use: 1,550 Acres: <input type="checkbox"/> Commercial: Use: 1,550 Acres: <input type="checkbox"/> Institutional: Use: 1,550 Acres: <input type="checkbox"/> | Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> | | |
| Institutional: Use: 1,550 Acres: <input type="checkbox"/> Residential: Use: 1,550 Acres: <input type="checkbox"/> | Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> Employee: UNKNOWN: <input type="checkbox"/> Employment: UNKNOWN: <input type="checkbox"/> | | |
| Residential: Use: 1,550 Acres: <input type="checkbox"/> | Employee: UNKNOWN: <input type="checkbox"/> | | |
| Project Issues Discussed in Document | | | |
| Planning/Policy: <input type="checkbox"/> Agriculture/Land Use: <input type="checkbox"/> Air Quality: <input type="checkbox"/> Coastal/Seascape: <input type="checkbox"/> Minerals: <input type="checkbox"/> Noise: <input type="checkbox"/> Population/Housing Balance: <input type="checkbox"/> Public Services/Facilities: <input type="checkbox"/> Recreation/Parks: <input type="checkbox"/> | School/Universities: <input type="checkbox"/> Sports Systems: <input type="checkbox"/> Water Quality: <input type="checkbox"/> Water Supply/Cleanwater: <input type="checkbox"/> | | |
| Planning/Policy: <input type="checkbox"/> Agriculture/Land Use: <input type="checkbox"/> Air Quality: <input type="checkbox"/> Coastal/Seascape: <input type="checkbox"/> Minerals: <input type="checkbox"/> Noise: <input type="checkbox"/> Population/Housing Balance: <input type="checkbox"/> Public Services/Facilities: <input type="checkbox"/> Recreation/Parks: <input type="checkbox"/> | Water Treatment: <input type="checkbox"/> Wetlands/Streams: <input type="checkbox"/> Wildlife/Animals: <input type="checkbox"/> Growth Inducing: <input type="checkbox"/> Landuse: <input type="checkbox"/> Cumulative Effects: <input type="checkbox"/> | | |
| Agriculture/Land Use: <input type="checkbox"/> Air Quality: <input type="checkbox"/> Coastal/Seascape: <input type="checkbox"/> Minerals: <input type="checkbox"/> Noise: <input type="checkbox"/> Population/Housing Balance: <input type="checkbox"/> Public Services/Facilities: <input type="checkbox"/> Recreation/Parks: <input type="checkbox"/> | Healthcare: <input type="checkbox"/> Hazardous Waste: <input type="checkbox"/> Other: <input type="checkbox"/> | | |
| Present Land Use/Zoning/General Plan Use | | | |
| Office: Industrial Business Park, Residential, and Parks | | | |
| Project Description | | | |
| The LCP Resubmittal document would revise the existing certified LCP in two main ways: (1) by designating the Sweetwater Marsh National Wildlife Refuge as open space, and (2) by modifying the arrangement of land uses, building height controls, and development intensity in the Midbayfront planning subarea. | | | |
| CLEARINGHOUSE CONTACT: | 916/445-0613 | | |
| STATE REVIEW BEGAN: 8-6-90 | STATE REVIEW END: 9-13 | | |
| DEPT REV TO AGENCY: 9-15 | STATE REVIEW BY SCH: 9-20 | | |
| AGENCY REV TO SCH: 9-15 | SCH COMPLIANCE: 9-20 | | |
| PLEASE FURNISH MCD WITH ALL COMMENTS | | | |
| AGID/AFCD: 17 (Resources, B, II) | Comments: <input type="checkbox"/> Reclamation: <input type="checkbox"/> DRN: <input type="checkbox"/> Caltrans: <input type="checkbox"/> Trans Planning: <input type="checkbox"/> Housing & Devol: <input type="checkbox"/> Food & Ag: <input type="checkbox"/> Health: <input type="checkbox"/> | | |
| 17 = Item by lead / ... = item by SCH | | | |
| MCD = Multi-Clearinghouse Document | | | |

4.0 ALTERNATIVE 8 - APPLICANT'S NEW REVISED DEVELOPMENT PLAN

4.1 ALTERNATIVE 8 DESCRIPTION

At the end of the public review period (Planning Commission hearing on September 26, 1990) Chula Vista Investors (the applicant) introduced a new revised Development Plan. This new proposed project is termed Alternative 8. The description of Alternative 8 impacts is presented in Section 4.0 and is more detailed than other alternative discussions since Alternative 8 is presently proposed by the applicant (see Volume II, Section 2.3).

Alternative 8 is very similar to the proposed project in concept and land use. However, Alternative 8 reduces the overall density of development and selected building heights, in comparison to the proposed project. Alternative 8 also eliminates development south of the public lagoon and increases park acreage. Table 2-I of Volume I compares the land uses and building heights of the proposed project and Alternative 8.

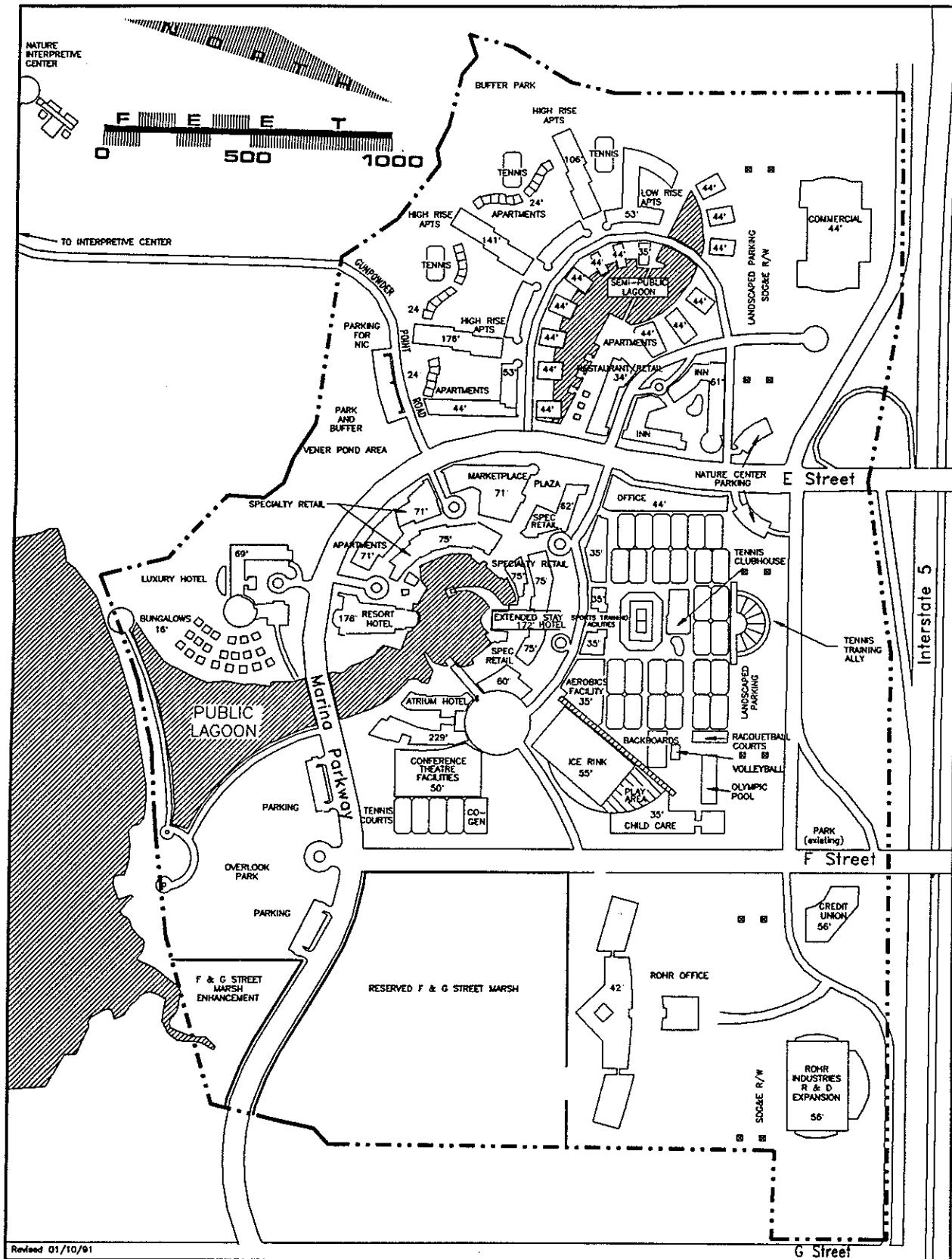
The total proposed development for Alternative 8 is approximately 3.9 million square feet (s.f.) of building space, in comparison to 4.2 million s.f. for the proposed project. The existing approved LCP currently allows 1.9 to 2.5 million s.f. of building space in the Midbayfront. Thus, the proposed Alternative 8 building space is approximately 1.4 million s.f. greater than the current maximum allowable density in the Midbayfront area. Additionally, the height of many of the buildings exceeds the height allowed by this certified LCP.

Figure 4.1-I shows the revised Midbayfront Development Plan (Alternative 8). As with the previous proposed project, the revised Development Plan shows that the outer edges of the north and west sides of the project area would consist of parks and part of a man-made lagoon. The 10-acre lagoon would be salt water, would not connect with San Diego Bay, and would extend into the central portion of the area. The parks and this lagoon would be made available for public use, as well as for resident and visitor use.

The types of uses intermixed within the remainder of the project area are the same, but their configuration is somewhat different from other alternatives described in the document. Alternative 8 proposes high-rise hotels (172 to 229 feet high), mid-rise hotels (up to 69 feet high), mid-rise and high-rise apartments (106 to 176 feet high), low-rise apartments, a 3.3 acre semi-public lagoon to serve apartment dwellers and restaurant users north of "E" Street, retail shops, restaurants, offices, a co-generation facility and a conference center, as well as athletic facilities including a tennis complex, swimming facility and an ice rink.

As with the proposed project, wetland setbacks would occur along the perimeter of the Midbayfront which is adjacent to both the bay and the NWR. The LCPR No. 8 text (Figure 2.3 of the LCPR No. 8 text) shows the following limitations within these setbacks; comments in parentheses are uses proposed under Alternative 8:

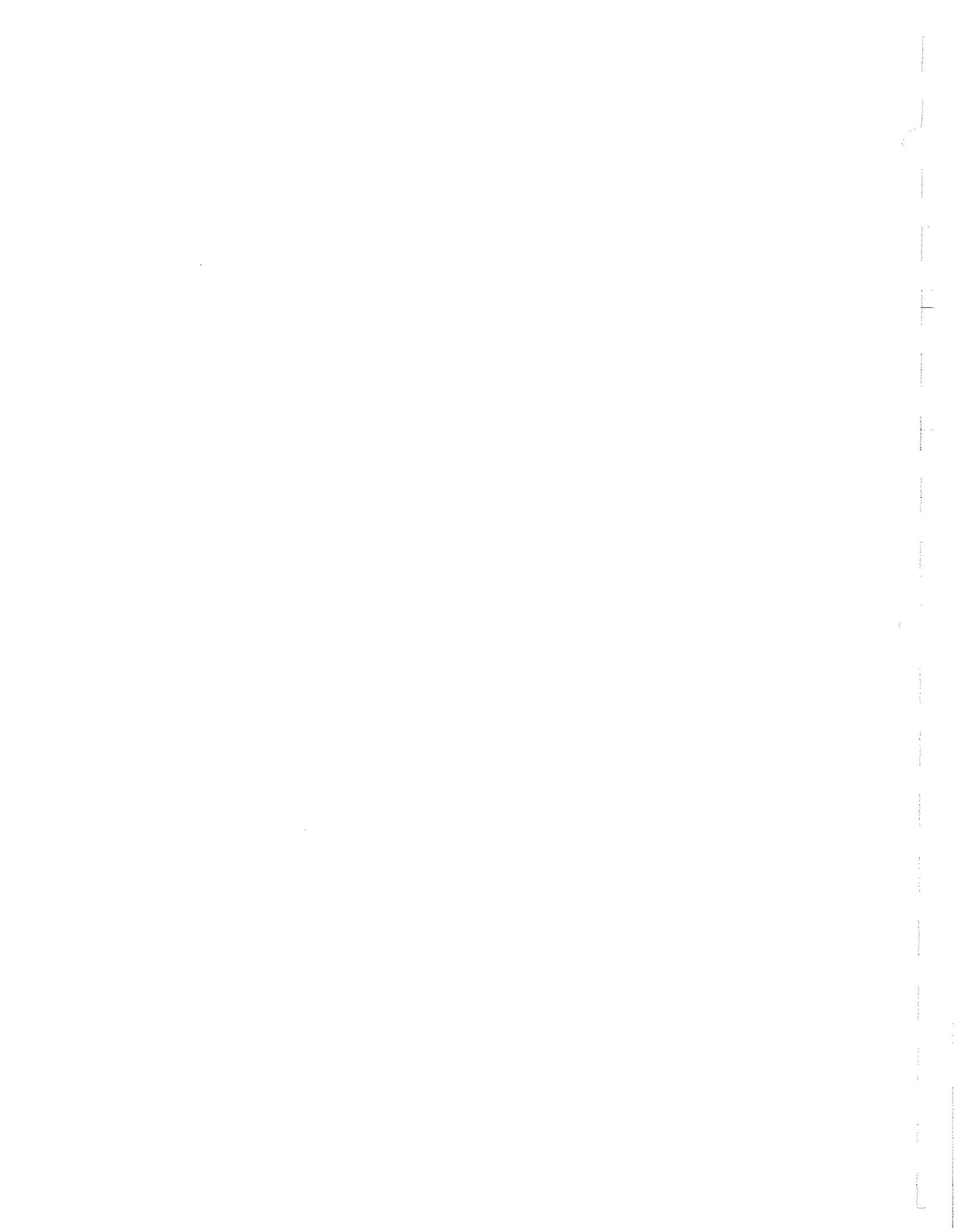
**JOURNAL OF POLYMER SCIENCE: PART A
SUBMISSIONS**



ALTERNATIVE 8

POWERED BY DEMOCRATIC INNOVATION

Figure 4.1-I



| <u>Setback</u> | <u>Location</u> | <u>Use Allowed</u> |
|-----------------|---|--|
| Wetlands Buffer | 100 feet from property line in toward NWR. | No uses allowed - open space. |
| Primary Zone | 100 feet from property line in toward development. | Property line - 50' - No public access. 50'-100' - Park pavilions, bicycle paths, pedestrian paths. |
| Secondary Zone | 100 feet from primary zone in toward development. | Low-rise buildings, some mid-rise buildings (low-rise equivalent to 6-stories or 60'; mid-rise equivalent to 7 to 12 stories or up to 130'). |
| Tertiary Zone | 100 feet from secondary zone in toward development. | Low-rise buildings, mid-rise buildings, some high-rise buildings (high-rise equivalent to 13 to 22 stories or up to 229'). |

As with the previously submitted proposed project, the developer proposes traffic improvements as part of the project. These improvements include the following five measures:

1. Restripe the "E" Street overpass to provide two through lanes per direction, and two left-turn lanes from eastbound "E" Street to I-5 northbound.
2. Widen the northbound I-5 on-ramp at "E" Street to accommodate the dual left-turn lanes from eastbound "E" Street to this ramp.
3. Widen westbound "E" Street from the northbound I-5 on-ramp to provide a separate right-turn lane from westbound "E" Street to this I-5 ramp.
4. Restripe the I-5 northbound off-ramp at "E" Street to provide an exclusive left-turn lane and a shared left and right-turn lane.
5. Construct I-5 southbound off-ramp with four lanes to "E" Street/Marina Parkway. Additionally, provide a loop ramp for westbound "E" Street traffic to access southbound I-5.

In addition, the following four measures are also proposed by the applicant to reduce traffic impacts from the project:

6. Addition of a fourth lane on the future I-5 southbound off-ramp to "E" Street, and the lane alignment across "E" Street to Bay Boulevard.
7. Widening of Bay Boulevard by approximately 15 feet to the west, thereby providing three northbound and one southbound lanes at the south leg of the Bay Boulevard/"E" Street intersection. Also shown is the minimum clearance of nine feet between the new westerly curb and the centerline of the AT&SF railroad tracks.

8. Widening of the I-5 northbound off-ramp at "E" Street to provide a third lane to be used as a "right-turn only" lane in the future. Also shown are topographic elevations that indicate that the third new lane at elevation 30.0 feet is within ramp grade requirements when compared with the 31.8 feet elevation at the trolley tracks on "E" Street.
9. Revision to the median and north curbs on "E" Street east of the I-5 northbound ramps to align with the revised bridge deck striping and a third westbound lane at the approach to the northbound ramp.

The project applicant has also proposed a new phasing plan along with the Alternative 8 Development Plan. This phasing plan, submitted by Peterson and Price on October 19, 1990, is shown below. Reference should also be made to Figure 2.1-I in reviewing the Phasing Plan as this figure identifies the Residential and Apartment areas by letter.

| <u>Phase I (1991 - 2000)</u> | <u>Parking Spaces</u> |
|---|-----------------------|
| Main Lagoon | 0 |
| Atrium Hotel (600 rooms) | 624 |
| Extended Stay Hotel (300 rooms) | 312 |
| <u>Tennis Club/Training Center</u> | |
| Dormitory (50 units @ 1 ea) | 50 |
| Stadium Court (2,000 seats @ 1/3.5 seats) | 571 |
| General Area (97,000 @ 2/1,000) | 195 |
| <u>Residential "A"</u> | |
| (1 Br - 215) | 323 |
| (2 Br - 120) | 240 |
| <u>Residential "E"</u> | |
| (1 Br - 164) | 246 |
| (2 Br - 154) | 308 |
| <u>Rohr Industries Corporate Headquarters</u> | |
| (245,000 @ 3.3) | 809 |
| <u>Credit Union</u> | |
| (40,000 @ 3.3) | 132 |
| (20,000 @ 5.0) | 100 |
| Overlook Park | 66 |
| "F" & "G" Street Enhancement & Desilting Pond | 0 |

| | |
|--|-------------------------------|
| Streets - | 0 |
| Marina Parkway | |
| "F" Street | |
| Bay Boulevard | |
| Gunpowder Point Drive | |
| Restripe "E" Street | |
| Widen westbound "E" Street | |
| Nature Center Parking | 54 |
| Interior Street System | 0 |
| Retail Center (5/1,000) | 725 |
| Co-Generation Plant | 0 |
| Conference Center | |
| Assembly Area (25,000 @ 1/50sf) | 500 |
| General Area (15,000 @ 2/1,000) | 30 |
| Vener Pond | 48 |
| Subtotal: | 5,333 |
| <u>Phase II (4 years 2001 - 2004)</u> | Parking Spaces |
| Office (60,000 @3.3/1,000) | 198 |
| Residential Lagoon | |
| Rohr Industries | |
| Corporate Building (115,000 @3.3/1,000) | 380 |
| Manufacturing Facility (80,000 @1/800) | 100 |
| Athletic Facilities | |
| Ice Rink (5,000 seats @1/3.5 seats) | 1,442 |
| Child Care (7,000 @2/1000) | |
| Apartments "D" | |
| (1 Br-45) | 68 |
| (2 Br-42) | 84 |
| Retail at Residential Lagoon | 25 |
| Subtotal | 2,297 |

Phase III (4 years 2005-2009)

| | |
|---|------------|
| Resort Hotel (460+460/25) | 479 |
| Apartments "B" | |
| (1 Br-164) | 246 |
| (2 Br-84) | 168 |
| Widen S/B I-5 Off-Ramp @ Marina Parkway | |
| Buffer Park (N. of Res. Village) | 20 |
| SDG&E Right-of-Way Improvement | |
| Subtotal | 914 |

Phase IV (4 years 2009-2012)

| | |
|---------------------------------------|------------|
| Luxury Hotel (190+190/25) | 198 |
| Visitor Commercial at City Owned Site | 264 |
| (80,000 @3.3/1,000) | |
| SDG&E Right-of-Way Improvement | 0 |
| Apartments "F" | |
| (1 Br-96) | 144 |
| (2 Br-18) | 36 |
| Subtotal | 642 |

Phase V (3 years 2012-2014)

| | |
|------------------------|------------|
| Apartments "C" | |
| (1 Br-218) | 327 |
| (2 Br-80) | 160 |
| Inn | 260 |
| (250+250/25) | |
| Widen Bay Boulevard | |
| Widen N/B I-5 Off-Ramp | |
| at "E" Street | |
| Subtotal | 747 |

| | |
|----------------------|---------------|
| GRAND TOTAL | 9,932 |
| TOTAL PARKS | 23.2ac |
| TOTAL LAGOONS | 13.3ac |

4.2 IMPACTS OF ALTERNATIVE 8

Impacts resulting from development of the Alternative 8 Development Plan are described below. Overall, the impacts of Alternative 8 were found to be very similar to the proposed project in terms of the types of effects. Consequently, the impacts are described below in comparison to the proposed project, where appropriate. Significance findings and suggested mitigation measures are also the same for Alternative 8 as the proposed project, except where noted in this section.

4.2.1 Geology/Soils/Groundwater

The geotechnical constraints and impacts of Alternative 8 are essentially the same as the proposed project. Heights of various buildings have been adjusted but, with the exception of the deletion of the apartments in the area between the lagoon and the park to the south, the location and footprint of all structures remains the same as the proposed project.

Accordingly, ground settlement concerns remain the same. The luxury hotel and associated bungalows at the western portion of the site encroach onto uncontrolled fill soils overlying bay deposits bordering San Diego Bay. These materials are compressible and are considered unsuitable in their present condition for the direct support of any additional fills and/or proposed structures. Additionally, the ice rink, aerobics facility, child care facility, and tennis courts encroach onto compressible bay deposits of the seasonal fresh water marsh. These materials are likewise considered unsuitable in their present condition for the direct support of any proposed fills or structures. Overall, Alternative 8 impacts considered to be significant and not mitigated at the plan level include seismic hazards (ground displacement, liquefaction) and groundwater constraints from subterranean parking. Ground settlement and grading impacts are assessed as significant and mitigable.

4.2.2 Hydrology and Water Quality

The impacts on hydrology and water quality would be the same for Alternative 8 as previously described for the proposed project. Impacts assessed as significant and not mitigated at the plan level include flooding from storm drain overflow, erosion from inland and coastal flooding and impacts from urban surface runoff, including siltation and chemical contamination. Coastal flood hazards, flooding from the Sweetwater River, and groundwater extraction/lagoon contamination impacts are considered to be significant, but mitigable.

4.2.3 Visual Aesthetics/Community Character

Alternative 8 would have visual impacts very similar to those previously described for the proposed project and Alternative 3. Reference should be made to Volume II, Section 3.3. The building foot prints of Alternative 8 are almost identical to the proposed project, with the exception of the deletion of apartments between the lagoon and the park to the south. In general, building heights also remained very similar. Below are the major differences in structure heights between Alternative 8 and the proposed project.

| Building | Comparison of Selected Building Heights | |
|--|---|---------------|
| | Proposed Project | Alternative 8 |
| Resort Hotel | 265' | 176' |
| Luxury Hotel | 120' | 69' |
| Atrium Hotel | 265' | 229' |
| Extended Stay Hotel | 172' | 172' |
| Residential above Commercial Retail (central) | 71-75' | 60-75' |
| Residential (north) | 40-176' | 24-176' |

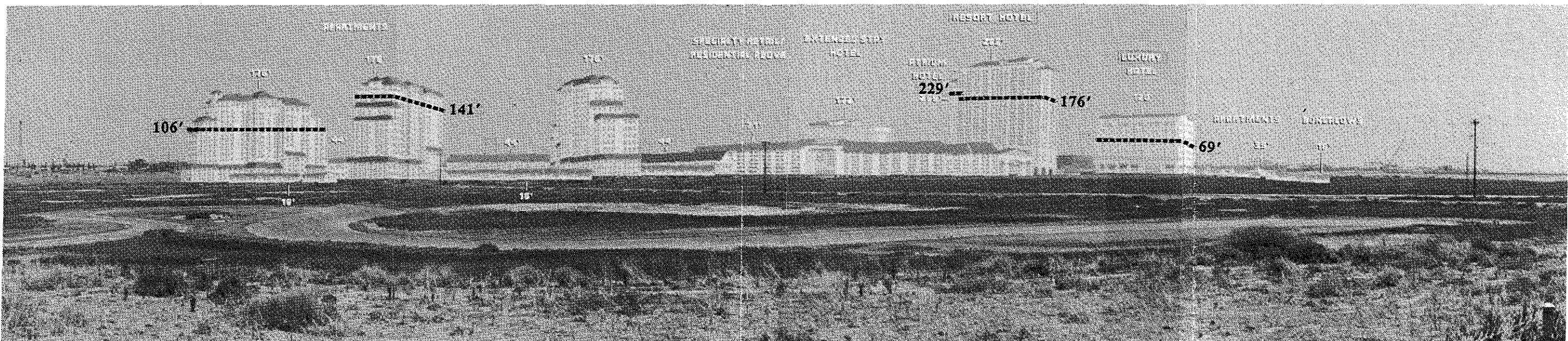
Plates I through III show the relative heights of Alternative 8 buildings in comparison to those of the proposed project. The following is a brief comparison of the Alternative 8 visual impacts with those of the proposed project.

KOP No. 1 - Sweetwater Marsh National Wildlife Refuge/Chula Vista Nature Interpretive Center

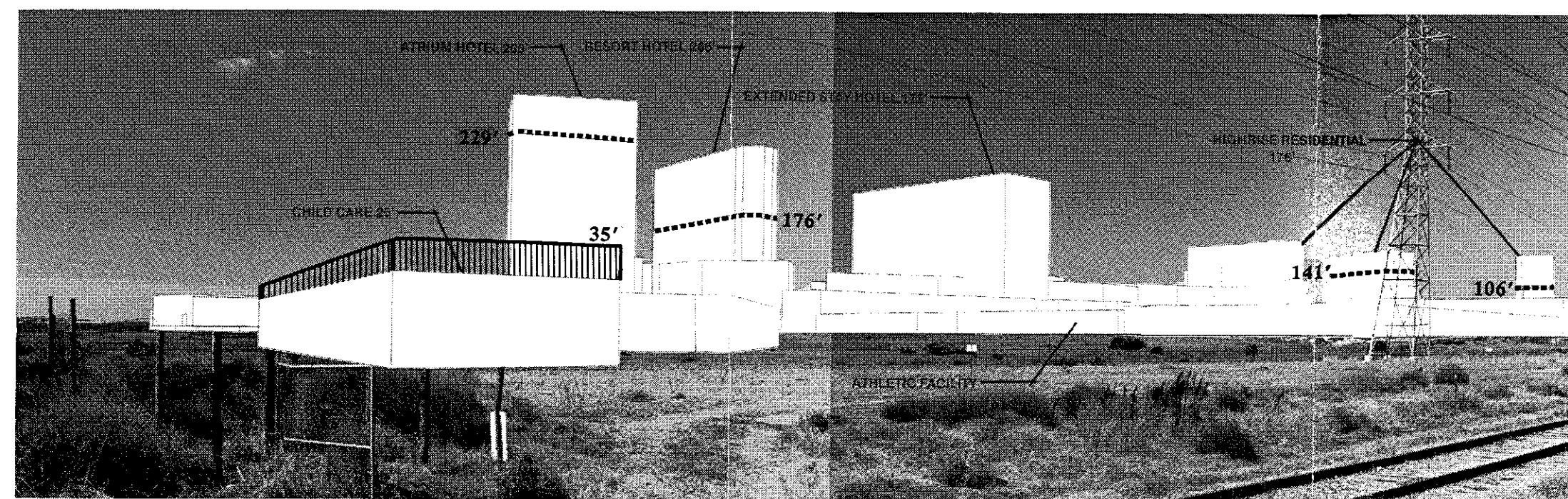
KOP No. 1 is the overlook to the Sweetwater Marsh in the direction of the proposed Midbayfront development.

The Alternative 8 Development Plan would introduce dominant urban forms within the foreground distance zone of this KOP similar to the proposed project. Closest to the observation point would be the high-rise apartments (176', 141' and 106') and low-rise apartments (24') that would be located approximately 1,300' east and southeast of the Interpretive Center. To the southeast, other project buildings would also be visible; including the specialty retail with residential above (44'), the Extended Stay Hotel (172'), the Atrium Hotel (229'), the Luxury Hotel (69'), the Resort Hotel (176') and the bungalows (16'). Cumulatively, the proposed structures will form a solid urban mass that will eliminate current views to the SDG&E powerlines, I-5 and the City of Chula Vista. Alternative 8 development will be visually and aesthetically dominant from this viewpoint,

ALTERNATIVE 8 - COMPARISON TO PROPOSED PROJECT



KOP #1

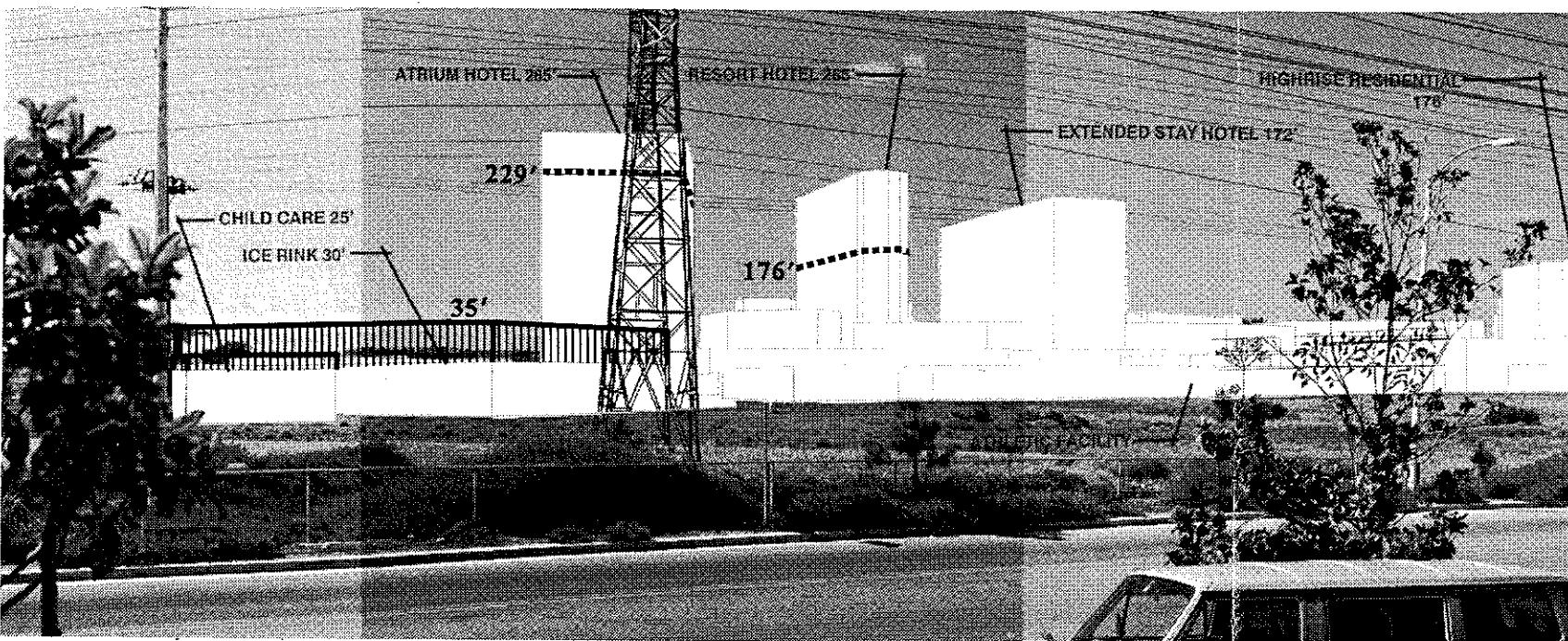


KOP #2

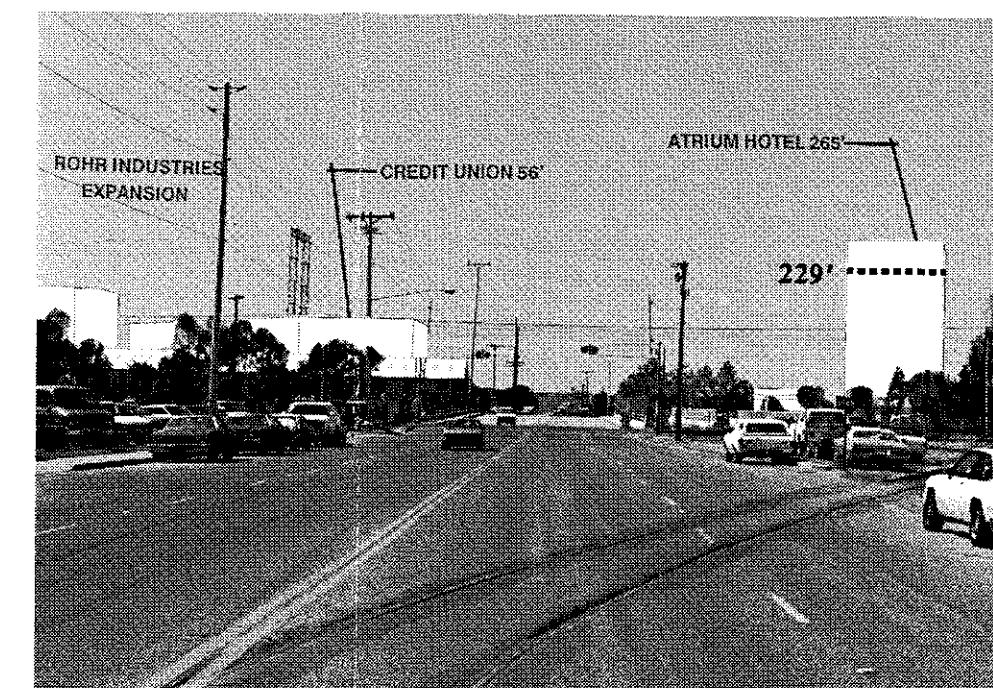
----- Lower Building Height
██████ Higher Building Height

LCP RESUBMITTAL #8

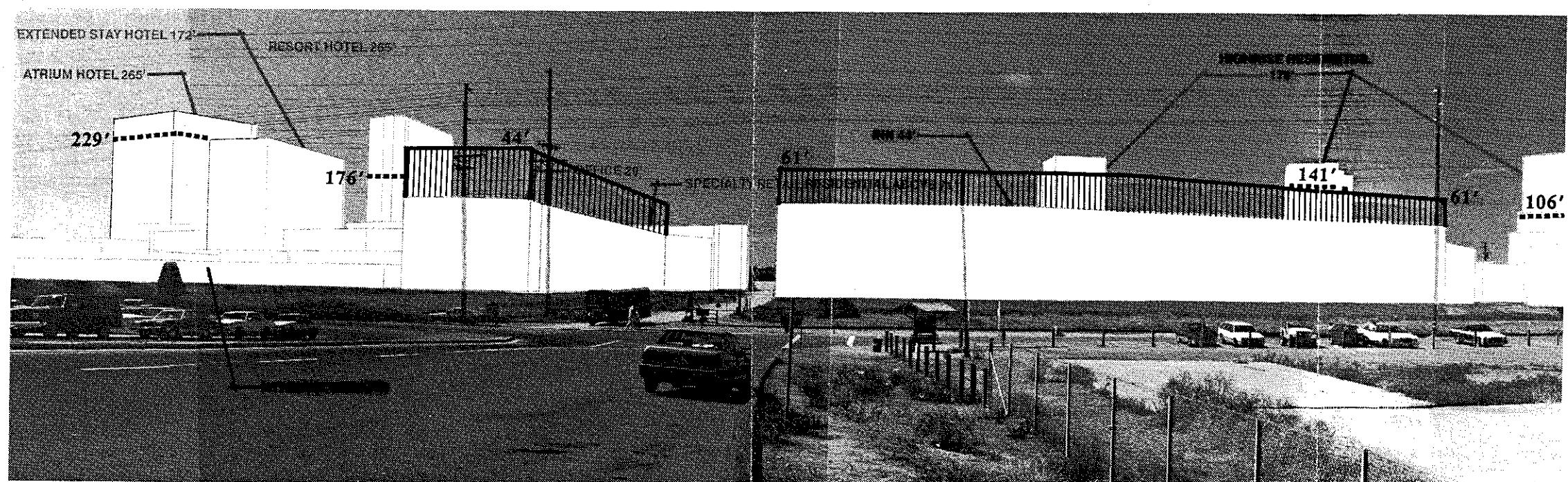
ALTERNATIVE 8 - COMPARISON TO PROPOSED PROJECT



KOP #3



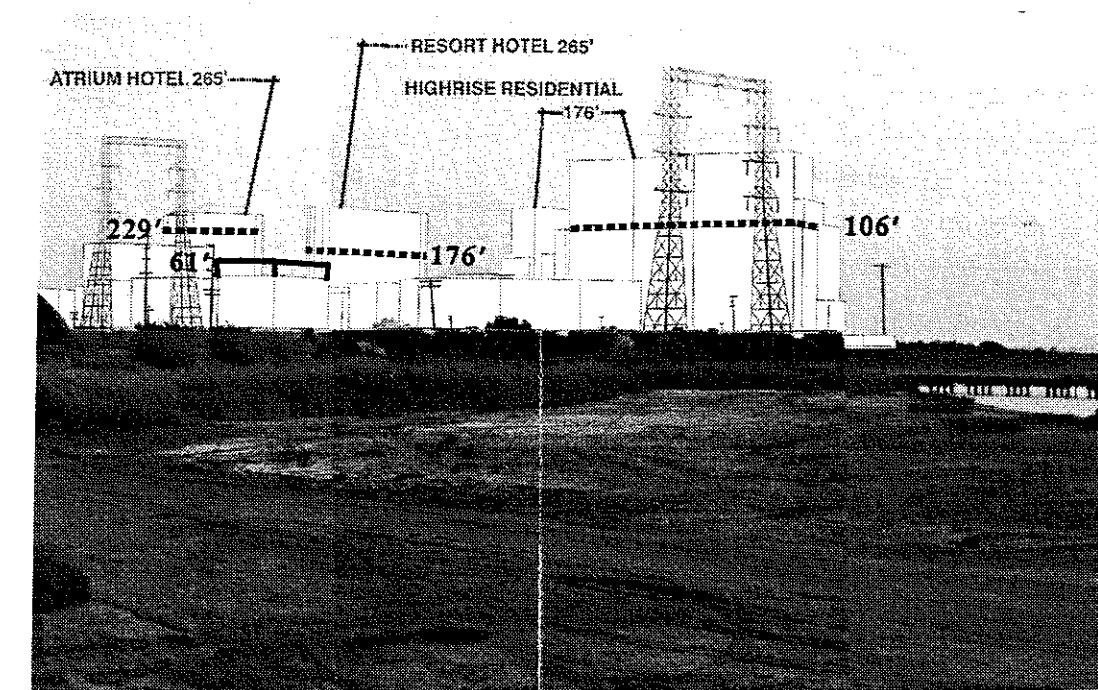
KOP #4



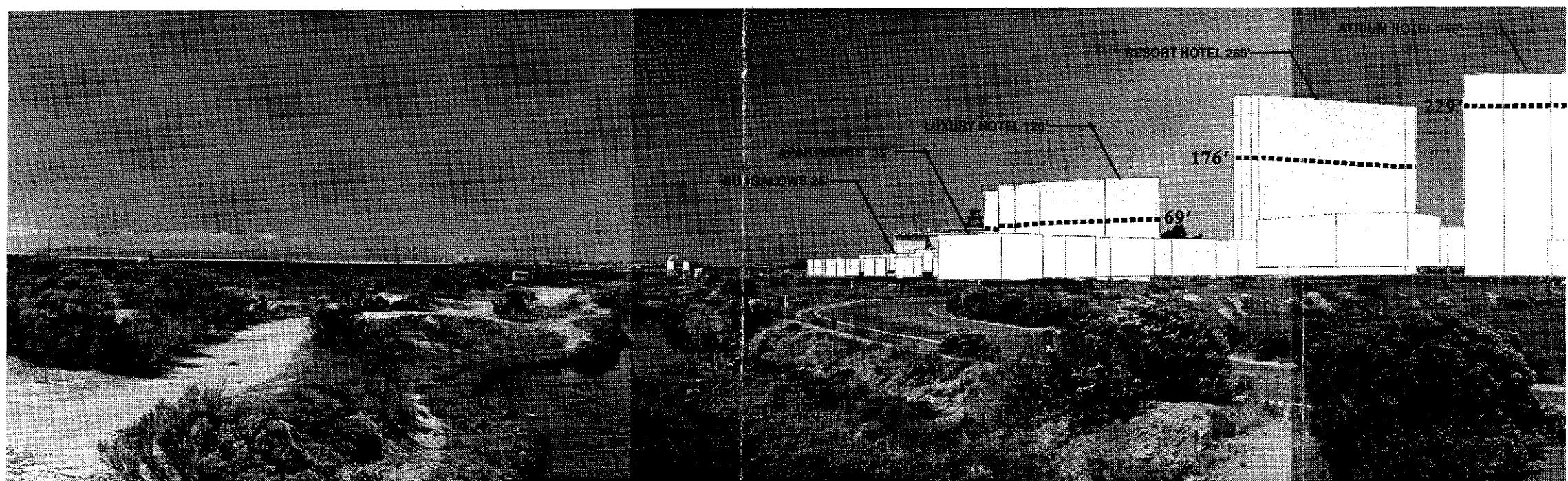
KOP #5

----- Lower Building Height
██████ Higher Building Height

ALTERNATIVE 8 - COMPARISON TO PROPOSED PROJECT



KOP #6



KOP #9

----- Lower Building Height
||||| Higher Building Height

with the current wetlands and wildlife habitat providing immediate foreground diversity. The visual/aesthetic impacts from this viewpoint are considered significant since the project will change the overall character of the view from a predominantly natural and scenic wetlands setting to one of intense urban development.

KOP No. 2 - "F" Street at the Midbayfront Project Boundary

KOP No. 2 provides open and expansive views to the San Diego Bay in a northerly direction.

Similar to the proposed project, Alternative 8 will retain a view corridor to the bay at the end of "F" Street. The project will obstruct views to the north, however, including views to the Nature Interpretive Center and downtown San Diego. Structures that will be visually dominant from this viewpoint include the Extended Stay Hotel (172'), Resort Hotel (176') and the Atrium Hotel (229'). Within the immediate foreground will be the "F" Street Gateway, child care center (35') and ice rink (55'). Rohr Industry buildings will also be visible directly to the south (approximately 42' in height). Cumulatively, development of Alternative 8 would create a strong and dominant urban form of greater scale than surrounding developments. Views to the bay at the end of "F" Street will retain natural scenic water elements from this viewpoint. While Alternative 8 will significantly change the visual character of views from "F" Street, overall the impacts are not considered significant. Views to the bay will be maintained, and dilapidated areas will be renovated.

KOP No. 3 - Bay Boulevard/Soup Exchange

KOP No. 3 is representative of views along Bay Boulevard and from commercial visitor establishments that provide views to the bayfront. Overall the quality of views along Bay Boulevard are open and expansive, similar to KOP No. 2. Elevated views to the San Diego Bay are provided from the Soup Exchange.

Like the proposed project, the development of Alternative 8 would obstruct almost all views currently afforded from this KOP (as well as along the rest of Bay Boulevard). The project will create a high density urban form in its place, with the most prominent structures including the Extended Stay Hotel (172'), Resort Hotel (176') and Atrium Hotel (229'). In the immediate foreground will be sports center facilities (up to 35' in height) including tennis, racquetball and volleyball courts. The sports facilities will be in scale with the existing structures, although the higher hotels in the background will be visually dominant due to their height and mass.

The visual impacts to viewers at KOP No. 3 are considered to be significant since almost all bay views will be eliminated, and the project would be visually dominant from the existing commercial/resort establishments.

KOP No. 4 - "F" Street at Woodlawn

KOP No. 4 is one of the main view corridors to the bay that currently exists within the City of Chula Vista. The other view corridor is along "E" street and is discussed under KOP No. 5.

Following construction under Alternative 8, the existing view corridor westward along "F" Street would be maintained. None of the buildings would obstruct views from this location. Higher structures would be visible from the road, however, including the Rohr Building (41') and the Atrium Hotel (229'). Most other lower buildings would be visually screened by the existing urban development of the city, as well as the lower ground elevations of the proposed buildings. The aesthetic impacts of Alternative 8 would not be significant with respect to obstruction of bay views, since open visibility to the bay will be maintained. Aesthetic impacts related to the visual compatibility of the project with the surrounding City's urban form are also not considered significant. While the high-rise Atrium Hotel would create a visible and strong urban focal point, this singular structure will not dominate the City's character from this location.

KOP No. 5 - "E" Street at I-5

From "E" street west of I-5, the existing views are semi-open to the San Diego Bay.

With Alternative 8 development a view corridor to the bay in a westerly direction would be retained; however, the existing panoramic views would be replaced with views to the development. As part of the project, the existing dilapidated structures currently in the foreground would also be replaced.

Alternative 8 would exert a strong and dominant urban influence on the site. The high density of the proposed buildings would create an urban wall from this location. The high-rise buildings including the apartments (176', 141' and 106'), Atrium Hotel (229'), Resort Hotel (176') and Extended Stay Hotel (172'), would be visually dominant and of a greater vertical scale than existing urban forms in the City.

Visual impacts to bayside views are not considered significant since a view corridor would be retained. Despite this, aesthetic impacts on community urban form and image are considered significant, since the project would create an urban landscape that, viewed from the City's major transportation corridor, would dominate the overall low profile, residential, and suburban character and image of the City.

KOP No. 6 - I-5 Southbound

Interstate 5 southbound provides the greatest view of the site to regional travelers and tourists passing through the area.

Development carried out under Alternative 8 would be visually prominent from this viewpoint. High rise structures that would be visually dominant include the high rise apartment buildings (176', 141' and 106'), the Atrium Hotel (229'), the Resort Hotel

(176') and residential buildings throughout the development. The Alternative 8 project would partially obstruct the existing views; however, open views to the bay would still be evident. Overall, this alternative would be visually dominant from the interstate and would attract motorists' attention. Potential visual impacts to bayfront views are not considered significant since views to the bay and Sweetwater Marsh would be maintained. Significant impacts would result to the City's urban form and image as a bayfront community. The project would be visually dominant and create a large-scale and dense urban area that will contrast significantly with the City's existing downtown and community character.

KOP No. 7 - Marina Parkway

KOP No. 7 is located in a central section of the Midbayfront where Marina Parkway will be constructed.

A central view corridor to the San Diego Bay would be retained along Marina Parkway under the Alternative 8 Development Plan. Adjacent to the parkway, several buildings will be visible including retail specialty shops and residential to the north, and low (34' and 44') and retail and apartments (71') to the south. The views from this viewpoint would combine strong urban and natural scenic elements. The potential visual effects of the project are considered beneficial from this KOP since public views to the bayfront will be created and currently dilapidated areas will be improved aesthetically.

KOP No. 8 - Elevated Views from the Extended Stay Hotel Restaurant

At the present time, KOP No. 8 does not exist. The view was obtained from a helicopter at an approximate height of 150', where a high rise restaurant may be located following development of Alternative 8.

Views at approximately 150' from the surface will be panoramic and expansive, providing visibility to the Coronado Islands to the south, San Diego Bay, downtown San Diego, Coronado, and Coronado Bridge. In the background, other landmark features such as Point Loma would also be visible. In the foreground, proposed buildings also seen would include the Resort Hotel (176'), the Luxury Hotel (69'), the apartments located over the specialty retail, the salt water lagoon and the bungalows. Overall, the project would create viewpoints of high scenic interest and diversity. The project would have a beneficial effect on visual quality through the creation of unique panoramic views, not currently available to the public at this site.

KOP No. 9 - Marina Parkway South and Community Parks

KOP No. 9 is located along the Marina Parkway alignment at the southwestern edge of the LCP resubmittal area.

Development of Alternative 8 would create the street "Marina Parkway" and public park lands in the vicinity of KOP No. 9. Views to the bay, Coronado Bridge and downtown San Diego would be maintained from this vantage point. In addition, the project would aesthetically enhance the areas currently supporting industrial and abandoned land uses in

the foreground, through the creation of the public park. Alternative 8 project structures that would be visible from this viewpoint include, among others, the bungalows (16'), the Luxury Hotel (69'), and the Resort Hotel (176'). While Alternative 8 would create scenic viewing opportunities from Marina Parkway, buildings located west of the Parkway (e.g., the Luxury Hotel and bungalows) would partially obscure bay views along stretches of the road. Cumulatively, the project would create a strong urban form in the central and eastern parts of the viewshed. Visibility to the interstate, SDG&E powerlines, and the City of Chula Vista would be eliminated by the proposed Midbayfront buildings. Overall, visual and aesthetic impacts will be positive due to the creation of new public areas where foreground views to the San Diego Bay will be available. In addition, beneficial aesthetic effects will result from the elimination of deteriorated structures.

4.2.4 Conversion of Agricultural Lands

The proposed LCPR No. 8 and Alternative 8 Development Plan do not include agricultural uses. This is consistent with the existing certified LCP and the City's General Plan (Update). Past agricultural use has been relatively light in the area, and currently does not exist. It would be economically infeasible for the land owner to retain agricultural uses due to rising water costs in this area and the limited revenues of agricultural production. Thus, Alternative 8 would allow the conversion of land suitable for agricultural use from agricultural to urban uses. This conversion does not represent a significant impact in terms of the loss of potential production of coastal-dependent crops. It does, however, represent an incremental loss of agricultural land to development within San Diego County, which contributes to a regionally significant loss of agricultural lands to urban development.

4.2.5 Air Quality

Overall, impacts to air quality resulting from implementation of the Alternative 8 Development Plan will be similar to, but less than, those discussed in Volume II for the applicant's original proposed project. As with the applicant's original plan (see Volume II, Section 3.5), secondary project-related impacts from temporary emissions of construction or increased travel-related dust/fumes are either temporary or so small in comparison to automotive sources that their impact is negligible. Similarly, any potential air impacts related to operation of the co-generation plant will be evaluated and controlled during procurement of APCD permits (APCD issuance of a permit to proceed indicates that no adverse air quality impacts will result).

The project's greatest air impacts will result from vehicular traffic associated with project residential, recreational and commercial land uses. Regionally, personal commuting, hotel/tennis club visitor and specialty retail site customer travel will add to regional trip generation and increase the vehicle miles traveled (VMT) within the local airshed. Locally, project traffic, especially at rush hour, will be added to the Chula Vista roadway system near the development site. If such traffic occurs during periods of poor atmospheric ventilation, is comprised of a large number of vehicles "cold-started" and operating at pollution inefficient speeds, and is driving on roadways already crowded with non-project traffic, there is a definite potential for the formation of microscale air pollution "hot spots" in the area immediately around the project site.

Although these vehicular emissions impacts themselves represent only a small fraction of the regional emissions burden; this is an incremental contribution to a regionally significant impact. For air quality issues, recent court decisions hold that even an incremental contribution to an impact considered regionally significant is considered significant at the project level as well (King's County Farm Bureau vs. City of Hanford, 1990). Transportation Control Measures (TCMs), as well as mitigation measures for any temporary construction activity impacts are listed in Volume II, Section 3.5.

Finally, once parking garages have been designed, an additional air quality analysis must be performed to evaluate potential impacts to users of the garages.

4.2.6 Noise

Noise impacts associated with development under Alternative 8 will be related primarily to construction activities and increased vehicular traffic.

Construction activities, especially heavy equipment, will create short-term noise increases near various individual project sites; dominated initially by demolition of existing structures and large earth-moving sources, then by foundation and parking lot construction, and finally by finish construction. Upon completion, vehicular traffic on streets around the development area may create a higher noise exposure to Chula Vista residents beyond the noise levels currently experienced. Various on-site activities, such as the co-generation plant, a child care facility and outdoor active recreation may be locally "noisy," but such impacts will generally be confined on site and will not affect the non-project population.

The Alternative 8 Development Plan noise impacts could be mitigated to a level of less than significant; as based on the lessened square footage and project density, Alternative 8 would have impacts similar to, but less than, those identified for the applicant's original proposed project. For that project, all of the above concerns could be mitigated to a less than significant level based on common and fairly standard mitigation measures (the reader is referred to Volume II, Section 3.6). These same measures would also be applied under Alternative 8 development.

4.2.7 Biological Resources

The biological impacts from Alternative 8 would be expected to be the same in types and degrees of effect as the proposed project. Biological impacts are extremely similar between the alternative and proposed project since differences between the two plans relate primarily to building height, and Alternative 8's removal of apartment buildings south of the public lagoon.

Changes include lowering several of the buildings (e.g., up to 89 feet at the Resort Hotel). The Luxury Hotel would be lowered from 120 feet to 69 feet. In the residential area to the northern portion of the site, building heights have been varied to create a more gradual elevation rise in tiers progressing from the wetland areas of the Sweetwater Marsh.

This alternative would result in a design configuration similar to that of the existing project with the exception of the removal of apartments for the area located south of the public lagoon and shifting of parking areas. In addition, the wetland enhancement areas at the mouth of the "F" & "G" Street Marsh would be expanded.

An Alternative 8 biological impact assessed as significant and not mitigable, is the incremental loss of raptor foraging areas. Biological-related impacts considered significant and not mitigated at the plan level include water quality effects due to contaminant discharge, vector control effects, alteration of predator/competition/prey regimes due to changes in land use, and predator enhancement and impacts to two sensitive species - the Light-footed Clapper Rail and Belding's Savannah Sparrow. Significant and mitigable biological effects are associated with increased freshwater input, sediment accretion and erosion, construction impacts, human and pet presence, construction impacts to marine resources, and long-term impacts to eelgrass, mudflats, and the California Least Tern. Impacts assessed as adverse, but not significant, include impacts to avian flight patterns, impacts to wildlife from night-lighting, and long-term impacts to California Brown Pelican and Peregrine Falcons. Finally, biological effects considered to be of no or limited impact include the impacts of building shadows on habitat and impacts to Salt Marsh Bird's Beak.

4.2.8 Archaeology/History/Paleontology

Impacts to cultural and paleontological resources would be identical for development under Alternative 8 and the original proposed project. This is because ground disturbance remains the same; lessened project density and square footage relates to building height and not, in general, to placement or associated uses. In summary, impacts to both prehistoric and historic archaeological sites were assessed as being less than significant, as the project sites are non-unique and do not retain additional research potential or culturally sensitive features.

Impacts to paleontological resources were assessed as potentially significant, although implementation of standard mitigation measures (monitoring and evaluation of any located fossil remains) would reduce impacts to a less than significant level. The reader is referred to Volume II, Section 3.8 for specifics.

4.2.9 Land Use/General Plan Elements/Zoning

As noted in the discussion of the proposed project, the evaluation of land use impacts considers three factors: (1) the compatibility of the proposed project with the surrounding area uses; (2) the compatibility of the project's internal uses with each other; and (3) the consistency of the project land use designations with the surrounding area designations. Implementation of Alternative 8 would also require changes to the LCP text, similar to the proposed project.

Compatibility With Surrounding Area Land Uses

As described, Alternative 8 includes high density residential, a variety of commercial uses, public and quasi-public, and park and recreation areas in the Midbayfront.

The proposed types of land uses would be consistent with the surrounding areas, and are the types of land uses adopted by the existing certified LCP. The intensity of the land uses is, however, out of scale with the surrounding area. Intensity of land use is related to magnitude of development, or density, which can be quantified by assessing the amount of square footage over a given area. Greater density is achieved by either covering a greater percentage of a given area, or by increasing the height of a building, or by both. In the case of Alternative 8, the area coverage and the height of the buildings total approximately 3.9 million square feet of building area over the 135 acre Midbayfront area. Alternative 8 has an average density of 28,563 square feet to the acre, and 36 dwelling units per residential acre. In order to achieve this building area, and to provide parks and public areas, this alternative (which is similar to the proposed project), has building heights much higher than those of the surrounding areas. Most buildings in the immediately surrounding area are 1 to 2 stories, whereas the project buildings under Alternative 8 range from 1 to 22 stories. The City's existing certified LCP allows a maximum of 2.5 million square feet of building area over the site, 40 percent lower than that proposed under Alternative 8.

Thus, though the types of land uses result in no impacts to land use consistency with the surrounding area, the intensity of land uses would result in a greater intensity of development than was envisioned for this site and how it relates to the surrounding area. This is considered a significant land use impact.

The other part of the project, under both the previous proposed project and Alternative 8, the redesignation of urban uses on "D" Street Fill and Gunpowder Point to open space, is consistent with the recently established Sweetwater Marsh National Wildlife Refuge, and would result in no change occurring to these areas except a separate effort to restore them to their natural condition. There would be no impacts on the surrounding areas from leaving these areas in open space.

Compatibility Between Internal Land Uses

The internal land uses are composed of two different types of areas: (1) the open space associated with the National Wildlife Refuge lands; and (2) the urban uses associated with the Midbayfront Project area. The land uses within the urban area are considered generally compatible, with one exception. The residential units above the commercial retail and the nearby commercial visitor uses in the central core area would be exposed to much commercial activity. The influx of visitors would largely occur in evenings and on weekends when most residents would be home. Traffic congestion, competition for parking, noise from traffic and visitors, and night lighting could create significant incompatibility impacts.

Residential, office, visitor, and retail commercial development all could be compatible with open space or park use, but each would affect the character of such uses. The intensity of the urban land uses proposed for the Midbayfront by Alternative 8 is not considered compatible with the unique and protected open space uses of the adjacent Sweetwater Marsh National Wildlife Refuge, and the Chula Vista Nature Interpretive Center located within the Refuge. The proximity of the Alternative 8 development, (even with the buffers) coupled with its intensity, creates significant land use compatibility conflicts between these

two potentially very different areas. The buffers between the Midbayfront area and the NWR vary in width from 50 to 100 feet in the "F" & "G" Street Marsh area, and from approximately 125 to 200 feet in the parks which act as buffers between the development and the rest of the NWR.

Consistency With Land Use Plans

The applicant's submittal of the revised development plan (Alternative 8) did not accompany a revised LCP Resubmittal. Consequently, Alternative 8 is evaluated in conjunction with the proposed LCP Resubmittal in this section of the EIR.

Chula Vista Bayfront Local Coastal Program

The Alternative 8 future development proposed for the Midbayfront subarea would be allowed only with approval and certification of the LCP Resubmittal. The proposed changes to the LCP have been described in Section 2.0, Project Description, and briefly, include redesignating "D" Street Fill and Gunpowder Point to open space, and redesignating land uses and their densities within the Midbayfront (Subarea 1).

General Plan (Update) - 2010

Alternative 8 land use types are allowed by the General Plan, however, the placement and intensity of uses exceeds the limits of the General Plan and are thus inconsistent. The project proposes to change the existing LCP which would in turn require an amendment to the General Plan. If this occurred, then the proposed development of Alternative 8 would be consistent with the amended designations.

Redevelopment Plan

The proposed land use designations are generally consistent with the land uses suggested by the Alternative 8 Redevelopment Plan but are not consistent with the locations suggested by this plan.

Other Plans

The proposed designations are considered consistent with adjacent designations in UPD lands. National City designations are separated from the proposed Midbayfront (Subarea 1) designations by the National Wildlife Refuge over the rest of the site, and no land use consistency impacts would occur.

4.2.10 Community Social Factors

Alternative 8 proposes a mix of retail/entertainment, hotel, residential, commercial and recreational uses. A total of 1,400 one- and two-bedroom residential units are proposed under this alternative. One-bedroom units will account for 64 percent (900) of the residential capacity. Multiplying the total number of units by the City of Chula Vista multiplier of 1.94 results in an estimated population increase of 2,716 individuals. The

project area population and homes would constitute approximately three percent each of the estimated 1989 housing growth and increased population for SRA 21; as well as approximately three percent (population) and four percent (housing) of the 2010 housing population projections.

The amount of permanent housing and population growth that was anticipated for the project area is less than that proposed. The existing LCP allows approximately 543 dwelling units over the Midbayfront area. Thus, Alternative 8 housing and resulting permanent population represents an approximate 158 percent increase over what was planned. The comparison of number of housing units for the project and Alternative 8 is shown below.

| <u>Alt. No</u> | <u>Projected</u> | <u>Proposed</u> | <u>Difference</u> | <u>Percent Increase over Projected</u> |
|------------------|------------------|-----------------|-------------------|--|
| Proposed Project | 543 | 1,550 | + 1,007 | 185 |
| 8 | 543 | 1,400 | + 857 | 158 |

These increases are significant for the project site, but are less than significant on a subregional basis where the increase averages three percent.

Regarding employment, the number of potential employers is currently unknown as the types of all commercial uses are not yet known. It is anticipated that substantial employment opportunities will be available, resulting in beneficial impacts to both the City and regional economy.

4.2.11 Community Tax Structure

Alternative 8 would develop over 100 acres with land uses which would increase the property value in these areas, but the National Wildlife Refuge lands (316 acres) would be committed to permanent open space. Because the project site is in a designated Redevelopment area, all increases in property value from project development will be taxed one percent, and will go to the City's Redevelopment Agency. Thus, the County and the School Districts would not receive monies from the improvement of this site, however, this situation is not unique to this site, as Redevelopment Law allows monies to be distributed in this way.

4.2.12 Parks, Recreation and Open Space

Alternative 8 includes 23.2 acres of parkland and a 10-acre public lagoon. The lagoon is not a park in the normal use of the word; however, some portion of the lagoon could be considered public because there would be opportunities for people to rent small paddle boats, and to access the outer edges (no bodily contact with the water would be permitted). Neither the LCPR No. 8 nor Alternative 8 specify how the lagoon would be accessed. Consequently, unless access is provided, the credit cannot be given. Alternative 8 also shows 7.6 acres of parkland within the SDG&E right-of-way (ROW), and 22.9 acres of commercial retail uses such as shops, restaurants, hotels, and the associated walkways. The athletic area,

covering 16.3 acres, will also be approximately 50 percent available for public use. Below are the City's acceptance of areas suitable to be defined as parks, which include the perimeter land-based parks which are not located under the SDG&E power lines (138 kV). The City would consider the 7.6 acres under the power lines suitable for landscaped parking.

| Comparison of Parks and Other Public/Semi-Public Acreage | | Proposed Project | Alternative 8 |
|---|--------------|-------------------------|----------------------|
| Parks | 18.9 | | 23.2 |
| Other Public/Semi-Public Acreage | | | |
| Lagoon | 10.0 | | 10.0 |
| Landscaped Parking under SDG&E Transmission Corridor | 7.6 | | 7.6 |
| Athletic Facilities* | 8.15 | | 8.15 |
| Commercial Visitor/Retail Areas | <u>22.9</u> | | <u>22.9</u> |
| Total Public/Semi-Public | 67.55 | | 71.85 |

* This number assumes 50 percent public use allowed of a total acreage of 16.3 acres for athletic facilities.

In order to provide consistency with the recently established Sweetwater Marsh National Wildlife Refuge, Alternative 8 also includes a redesignation of land uses allowed in the existing certified LCP from residential and commercial to open space. The open space area would include 316 acres under the jurisdiction of the U.S. Fish and Wildlife Service (see Figure 2-III in Volume II).

The Midbayfront project area parks would function as Community Parks by City of Chula Vista standards (Mollinedo, 1989), and because of the unique bayfront location, are expected to service an annual City and regional population of approximately 150,000 people. Based on City Threshold Standards, the amount of parkland in the project area is more than adequate to service project area residents (City's Threshold Standard requirement: 3 acres per 1,000 project residents; anticipate approximately 2,700 residents) and no impacts would occur to this City requirement (Mollinedo, 1989).

Based on the 2010 City and regional population which the parks are anticipated to service (150,000 people annually), the amount of proposed parkland per 1,000 people provided under the Alternative 8 Development Plan is 0.15 acre. This acreage is significantly (25 percent or more) below the standards set by the City and the State, which require 2.0 and 2.5 acres per 1,000 people, respectively. In order to achieve consistency with the standards, approximately 270+ acres of parkland would be necessary, which is double the size of the

Midbayfront subarea, and of course, infeasible. This impact, though adverse, is not considered significant at the project level for the following reasons. First, the adopted LCP and General Plan both include park and open space requirements with which the project is consistent; neither of these plans require over 270 acres for parks. Secondly, the project is consistent with the Threshold Standards policy. Thirdly, the City and regional visitor attraction to these parks is not wholly a result of the proposed project, it is also a result of the location on the bayfront and wetlands, and proximity to the Nature Interpretive Center. By developing the parks, Alternative 8 would make the area more accessible (assuming that public parking and access is provided for), and would provide for public facilities which make it a more convenient place to visit. Alternative 8 thus would contribute to what is considered a cumulatively significant impact, as project development would encourage visitor use, bayfront/wetland-front location, and proximity to the Nature Interpretive Center.

Because of the anticipated high usage, it is extremely important that the parklands be designed to accommodate the types and numbers of users expected, and that adequate public facilities are available. It is important that the parklands be developed during the first phase of project development. The Alternative 8 Phasing Plan, Section 4.1, indicates that the lagoon, Vener Pond area and the Overlook Park are planned for construction in the first phase. The buffer park north of the "Apartments B" residential would be completed along with those apartments in Phase III. Also, it is important that other semi-public uses, such as the athletic facilities, are either free or available for a reasonably nominal charge so as to make them accessible to the public. The specific types of uses in the parking have not yet been developed; thus analysis beyond acreage is not possible.

Public Access

Public access issues and impacts are the same for Alternative 8 as for the proposed project (see Volume I, Section 3.12).

The ability of the public to access the parks and retail commercial areas depends on the availability of public parking and access from the parking to the desired destination. There is a total of 9,932 spaces proposed with Alternative 8 which will be built in the five phases (outlined in Section 2.1). Out of this total, there will be 134 spaces for public park and 54 spaces for the Nature Interpretive Center parking for a total of 188 spaces. The 54 spaces allotted to Nature Center parking and 114 of the remaining "park" spaces will be provided in Phase I. The 20 remaining spaces, all associated with the buffer park north of Apartments "B," will be constructed during Phase III (currently scheduled for 2005-2009). The fact that park parking is slated to match park construction renders the Alternative 8 Development Plan better able to carry traffic load than the applicant's original proposed project.

Based on the City's standard for Community Parks of one parking space for every 10,000 square feet of accessible open space, 101 parking spaces would be necessary.

Parking spaces not being used for other designated uses, such as conference center, retail commercial, and athletic facilities could also be available for public parking. The LCPR No. 8 text (Figure 3-10) shows the distribution of parking spaces over the project site. The

spaces are located at the parks and along the SDG&E ROW. It is not clear whether the parking lots are located above-ground or under-ground at the parks location; this needs to be clarified because above-ground parking could reduce the amount of parkland. Also, the Plan is inconsistent where it calls for both parking lots and parks under the SDG&E ROW. (No parkland credit was given for this ROW.)

Based on discussions between City staff and Port District staff regarding parking needs for Bayfront Parks, 1.0 parking space per 1,000 square feet of parkland is a standard that is reflective of the parking for Port District bayfront parks. Assuming 23.2 acres of park, a total of 1,041 parking spaces would be to be provided in the bayfront area. Other public and semi-public areas would require spaces as well, although the exact requirement has not been determined at this time. Given the 134 spaces proposed for project park acres on overall surplus of 33 public parking spaces would result; or, based on Port District standards, a deficit of 907 spaces would exist. The City of Chula Vista must decide the required amount of parking for Alternative 8. At this time, the amount of parking is considered adequate and no impact is cited. The LCPR No. 8 states that "parking should be calculated on the Chula Vista standards (Chapter 19.62, City of Chula Vista Municipal Code) for each separate use. Because of the nature of the development, there may be a way to reduce the required parking with a "shared-parking plan." The LCPR No. 8 thus calls for compliance with the code, while stating that a reduced amount may be possible.

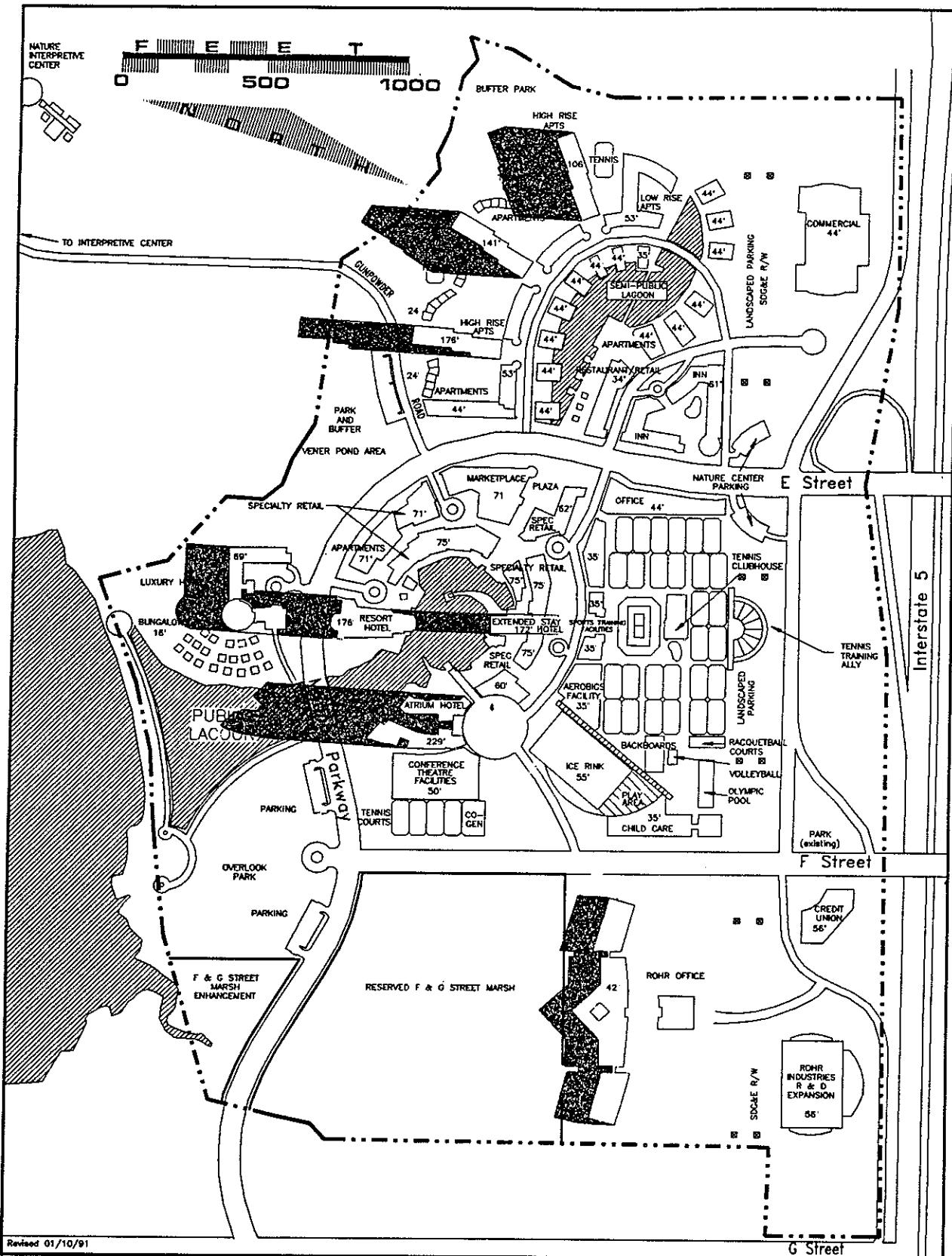
There is presently limited parking provided for the Nature Interpretive Center in the SDG&E right-of-way south of "E" Street. The long-term requirements for the Center, based on existing and projected attendance, would be 150 permanent spaces. The LCPR No. 8 text provides that public parking for use by the Center would be located within the Midbayfront (Section II.E.3.h.). Also, the text states (Section II.F.4.b.(3)): "A small public parking lot and public bus shelter will be provided in the Midbayfront at the entrance to the Wildlife Refuge. It should be noted that this proposed parking location would reduce the amount of acreage available for public park usage. Additional parking will be provided at "E" Street and Bay Boulevard." The LCPR Parking Distribution Concept (Figure 3-10) shows 50 public parking spaces near the entrance to the NWR (but no bus shelter) and 54 spaces at "E" Street and Bay Boulevard.

Shade/Shadow Impacts

The impacts of Alternative 8 on public areas, due to building shadows is similar to the proposed project, although the reduced building heights of Alternative 8 will result in somewhat less impacts than the proposed project.

A shade/shadow analysis was performed to ascertain impacts to park and public open space areas. Shade/shadow conditions for select times during the summer and winter are shown on Figures 4.2.12-I through 4.2.12-IV. Generally, shadows are the longest in the winter months in the mornings and evenings when the sun is low in the sky. Park areas are partially covered in the morning hours, however, park usage at these times would also be low. In the evenings, shadows would cover the part of the northern buffer park, as well as parts of the residential, commercial retail and visitor areas (core area), including the tennis courts. Park and core area usage during evening hours is expected to be high resulting in potentially significant impacts to park and public area use. Midday shadows (from 11:00

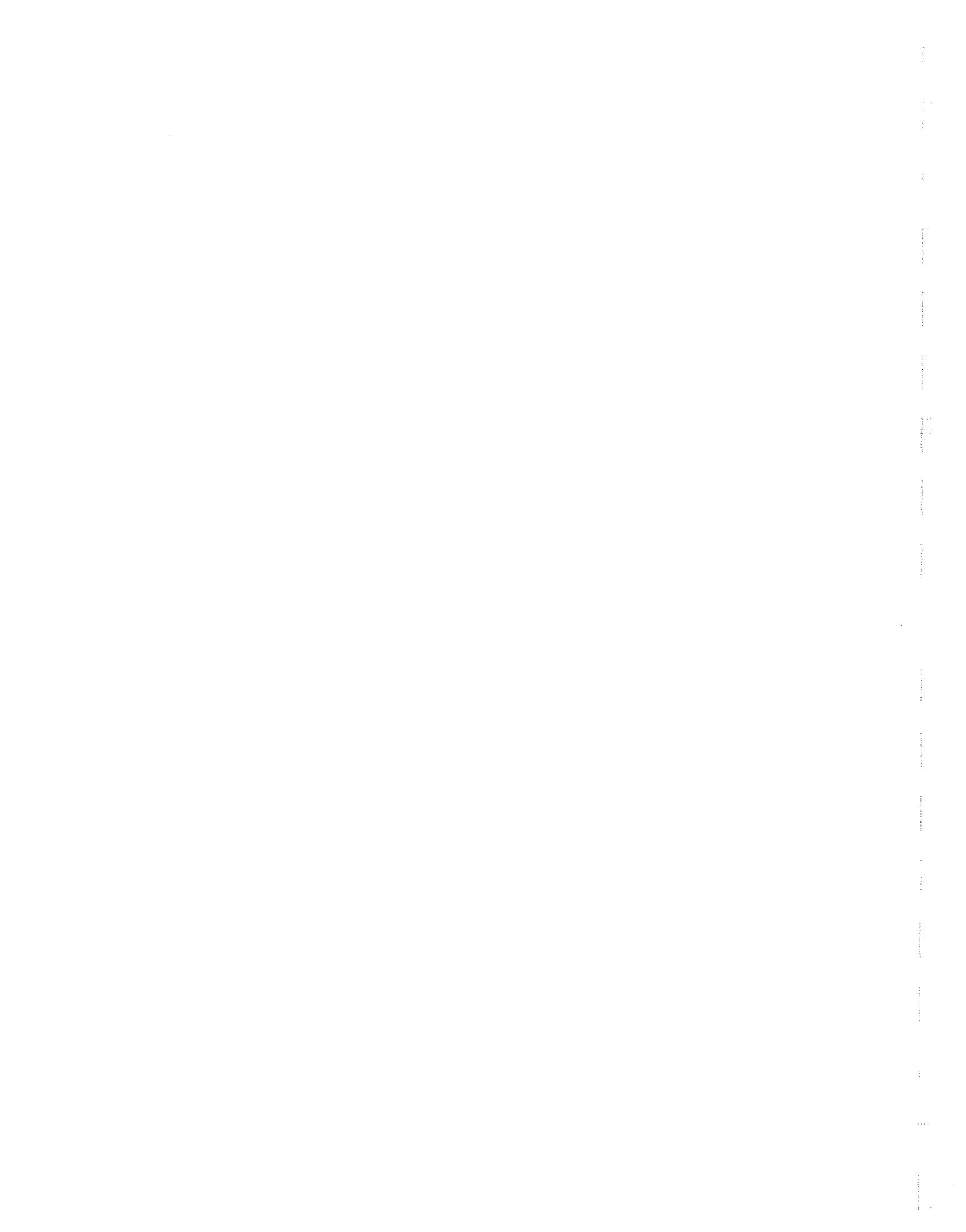
PRESUBMITAL #8



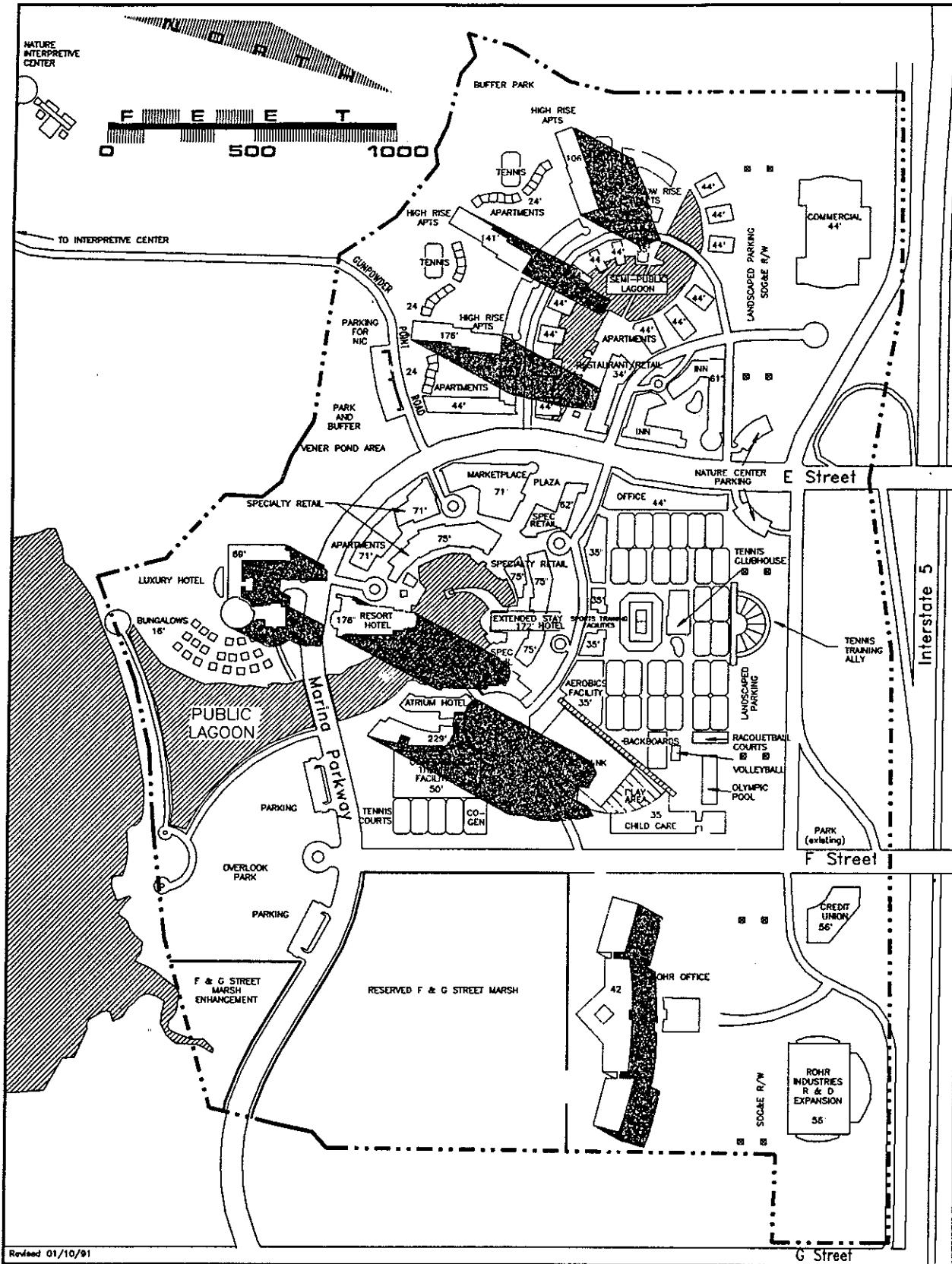
Summer Solstice - 7:00 AM

SHADE & SHADOW CONDITIONS

Figure 4.2.12-I



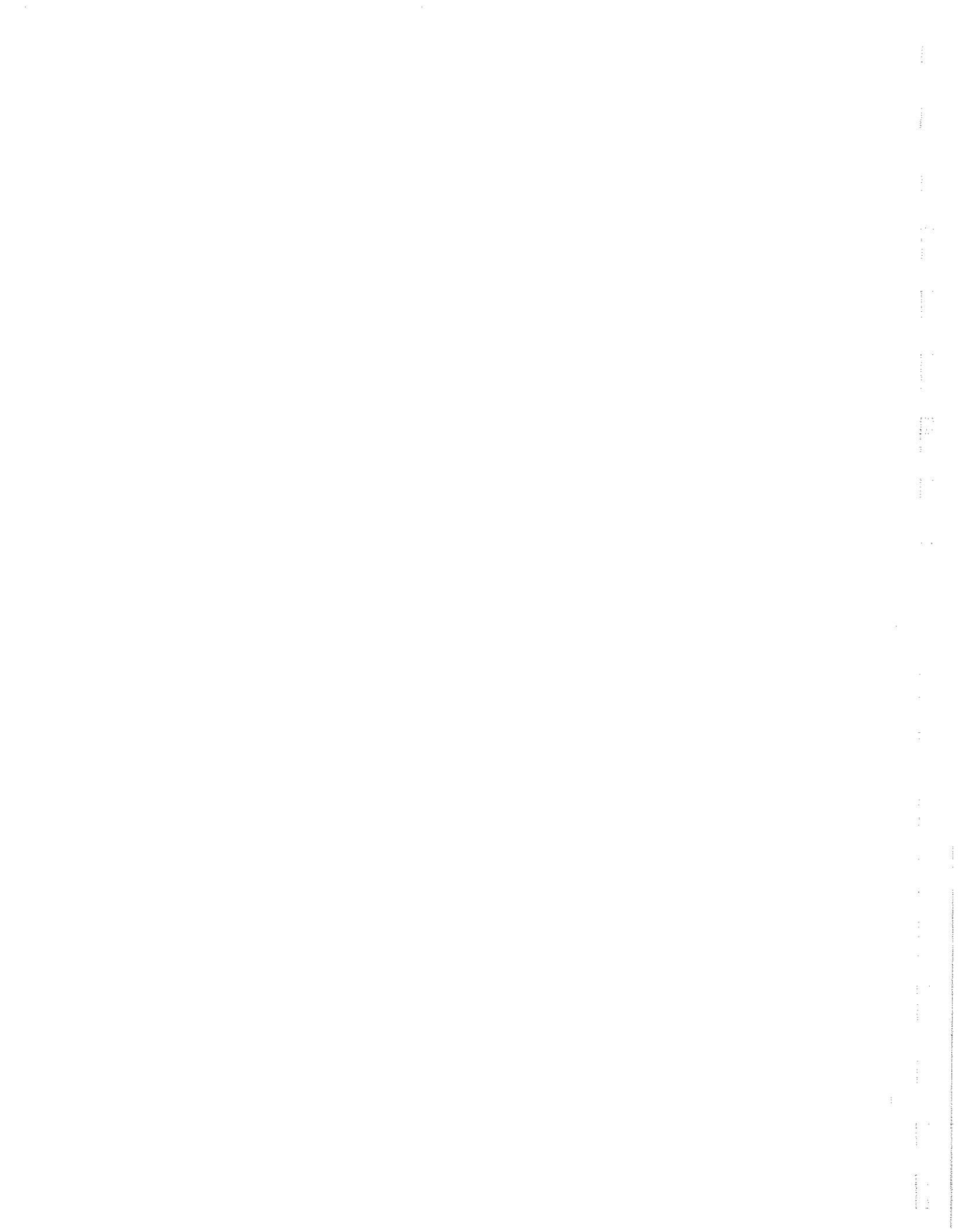
CP RESUBMITTAL #8



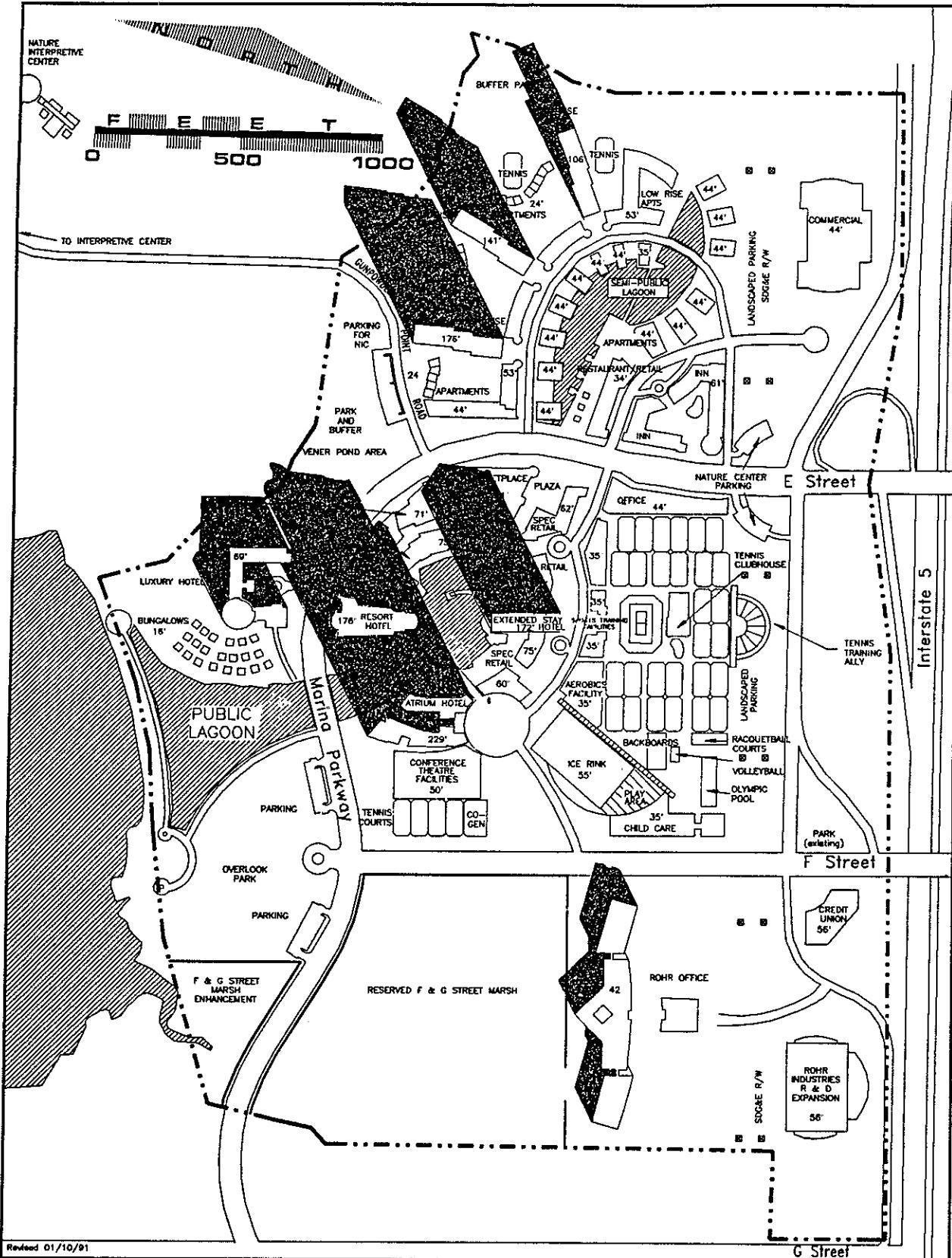
Summer Solstice - 5:00 PM

SHADE / SHADOW CONDITIONS

Figure 4.2.12-II



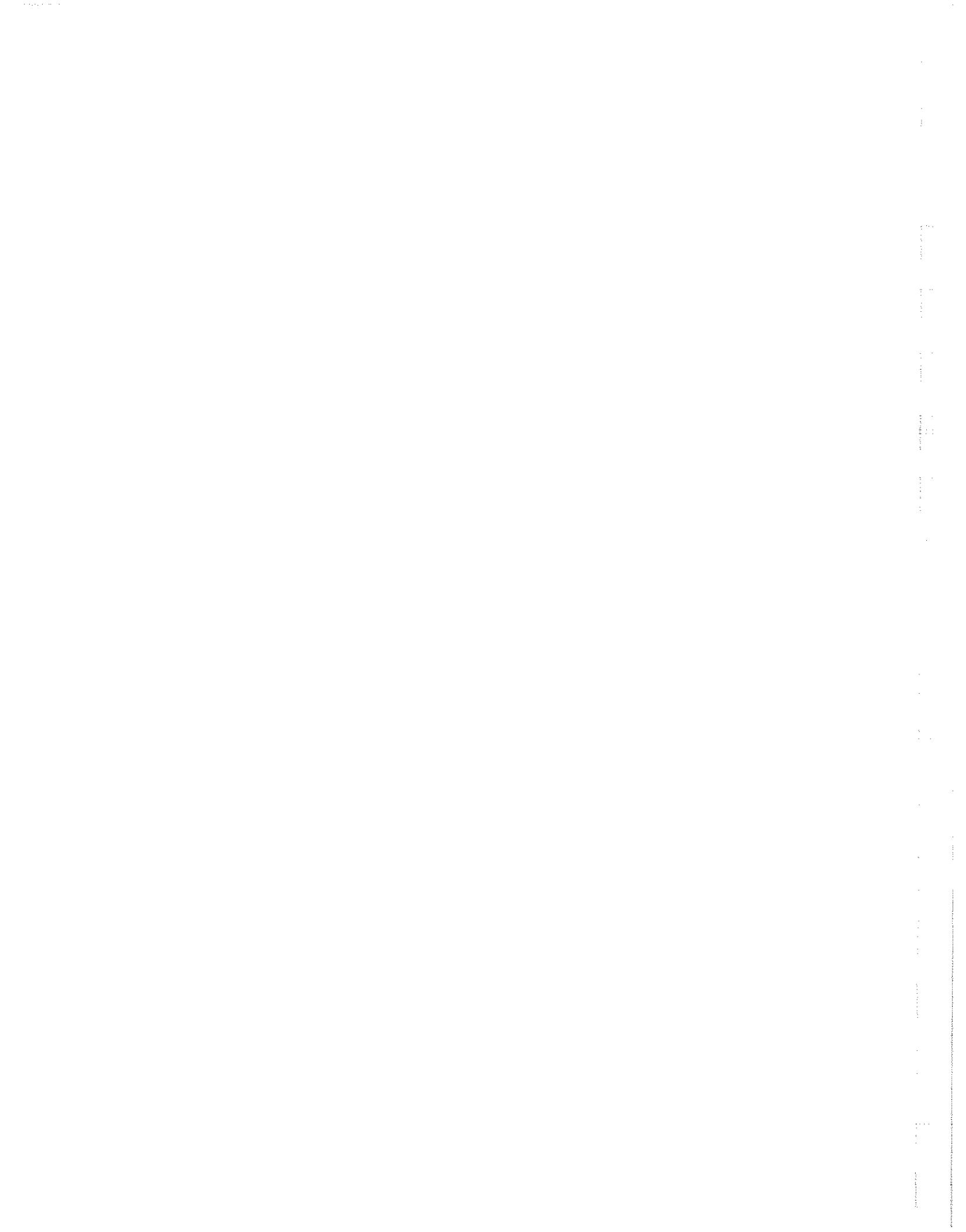
SUBMISSION #8



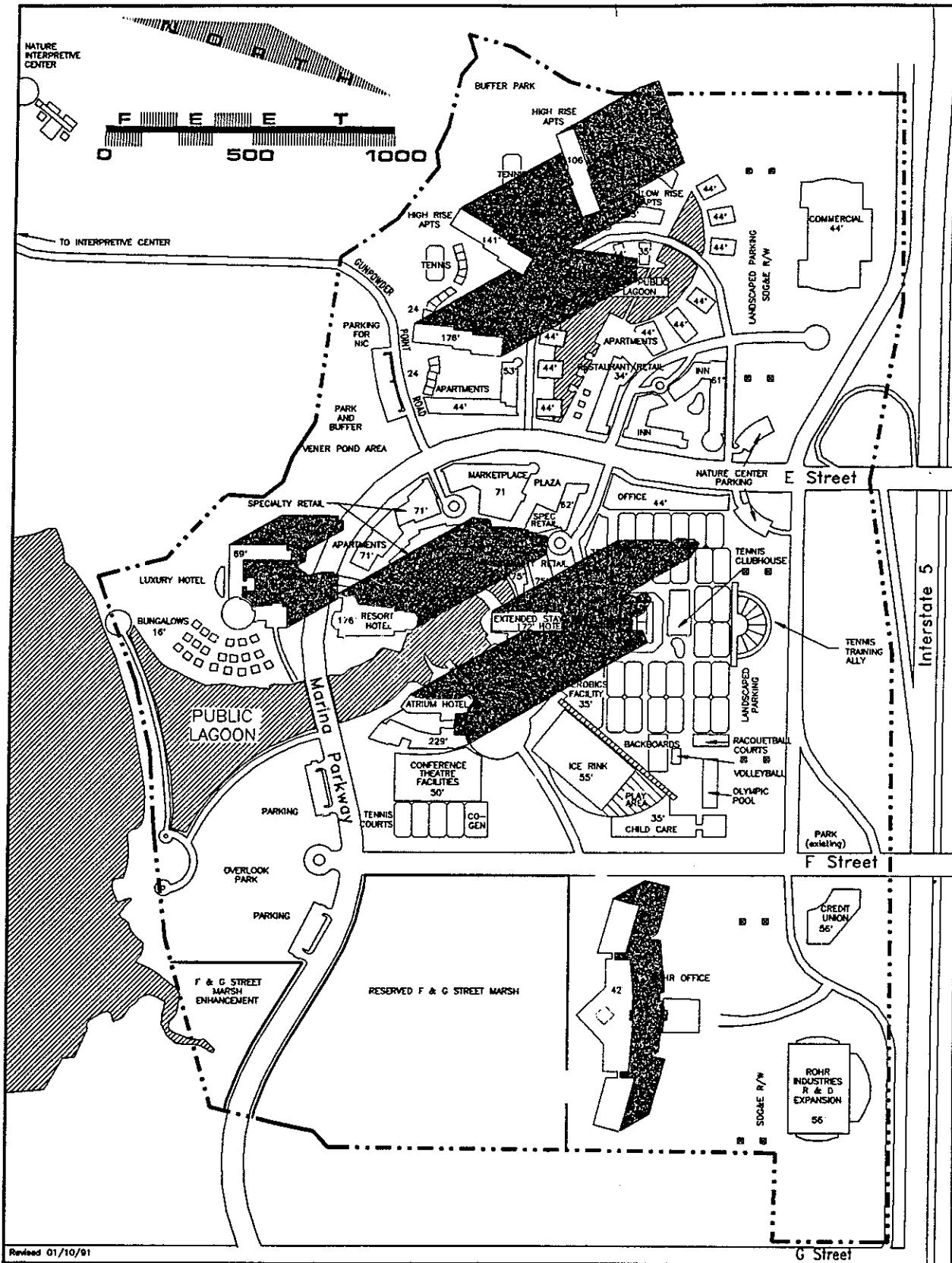
Winter Solstice - 9:00 AM

SHADES SHADOW CONDITIONS

Figure 4.2.12-III

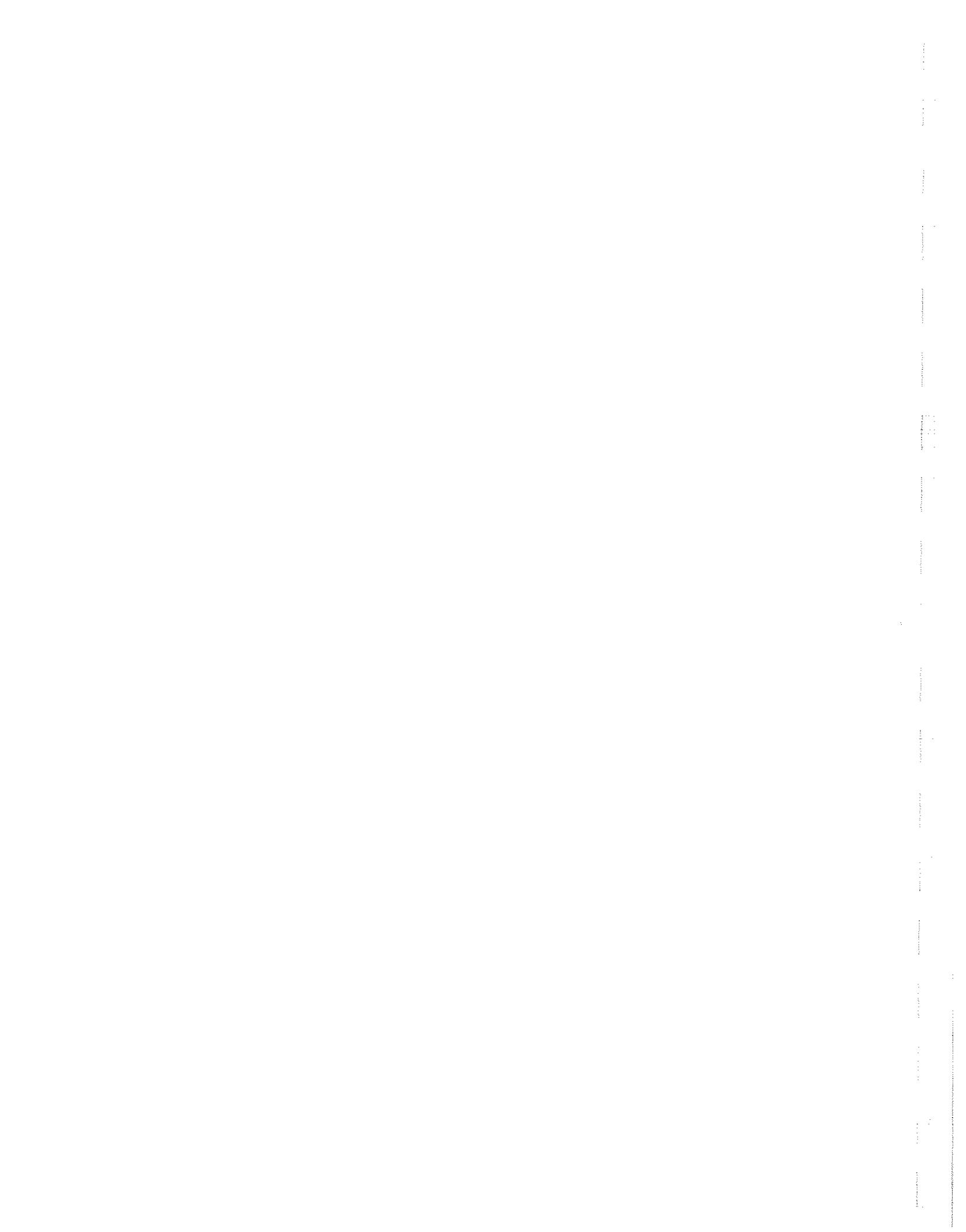


CP RESUBMITTAL #8



Winter Solstice - 3:00 PM

Figure 4.2.12-IV



a.m. to 2:00 p.m.) are much shorter than morning and evening shadows, especially during the summer.

4.2.13 Utility Service

Gas and Electric

Alternative 8 impacts to gas and electric usage are slightly reduced in comparison to the proposed project. Overall, impact issues are the same as were expected for the applicant's original proposed project (see Volume II, Section 3.13).

Development proposed under Alternative 8 would require power from SDG&E, though it is difficult to assess the quantity of gas and electric which would be needed because the precise types of commercial and industrial business park uses are unknown. Power for the residential and hotel uses is expected to total a minimum of 1,518,750 kw electrical and 56,000 therms of gas use a month if a combination of gas and electric resources are used.

Retail/restaurant and office square footage (a total of 790,000 s.f.) will also require a minimum of 15,800,000 kwh/mo. This is based on average usage of 2 kwh/s.f./mo for office space/small retail and restaurants. It provides a minimum projected drain as larger stores require a greater kwh per square foot and both the larger stores and restaurants also utilize therms per month; figures are not provided here as actual areal usage is presently undetermined.

Fire and Police

Police

The Alternative 8 would result in an increased permanent population in a largely undeveloped area of Chula Vista. This will place additional demand on the City's Police Department. Currently, in the Midbayfront and NWR areas, only the Nature Interpretive Center and one industrial use require police protection, and these both have very low numbers of calls requiring a response by police.

The City's current officer to population ratio is 1.2 officers per 1,000 citizens. At build-out, Alternative 8 would increase the City's population by approximately 2,715 residents (approximately 290 fewer residents than under the applicant's original proposed project), as well as patrons of the proposed project hotels and restaurants and an unknown number of people employed in the project area.

The City Police Department (Hawkins, 1991) indicated that in addition to the 2,716 new residents expected for project area dwellings, an additional 2,340 "transitory" residents would be generated by the project area hotels. This number was reached by multiplying the 1,800 hotel/inn rooms proposed under Alternative 8 by 1.3, the multiplier used to generate additional population under the original proposed project. These numbers total 5,056 potential area residents, requiring just over 6 additional officers at the 1.2 officers per 1,000 person population ratio. Based on complaint status summaries for a two-month period

provided by Captain Hawkins for developments similar in type to the proposed project (a shopping center, an inn and a townhouse area), the types of problems anticipated for the proposed development would primarily be thefts or burglaries followed by disturbance of the peace, stolen vehicles and a few violent confrontations including robbery and/or assault or battery.

As the project would achieve projected build-out up to 24 years after construction commences, hiring will take place on an as-needed basis, and should not significantly impact police protection. Assuming that police personnel and equipment are upgraded to meet the demand of the increased population, no significant impacts will result from the proposed project (Hawkins, 1989). Additionally, no impacts would occur to the City's threshold policy.

Fire

The development of urban, commercial and industrial uses under Alternative 8 in a currently mostly undeveloped area would place additional demand on the Fire Department to provide service. This would include not only fire/EMS protection, but an additional impact on inspection services as well. Impacts on fire protection services would be the same for Alternative 8, as previously documented for the proposed project (see Volume II, Section 3.13).

In summary, fire/EMS services will be provided for all planned development, including the Midbayfront proposal. Impacts from development of this alternative would create significant impacts due to the increased inspections, testing of fire protection systems, and public education programs (Gove, 1990).

Solid Waste

Impacts of Alternative 8 on solid waste services would be similar to, but slightly less than, the proposed project (see Volume II, Section 3.13).

The residential portion of the proposed project includes 498 two-bedroom and 902 one-bedroom units. The residences would require five trucks with full loads and one truck with a partial load to make a single pick-up once a week.

Because landfill space in San Diego County is extremely limited and continuing to decline rapidly, the solid waste from the project area would represent an incremental portion of a cumulative impact to the limited landfill space available.

Sewer

The City's ability to serve the project is governed by two factors: capacity rights and infrastructure. The City currently has capacity rights with METRO of 19.2 million gallons per day (mgd). The existing (April 1990) average daily wastewater volume for Chula Vista is 10.5 mgd, which leaves an available capacity of 8.7 mgd. The Alternative 8 development would generate approximately 0.3 mgd (similar to the original proposed project) which represents approximately three percent of the remaining available capacity. The project

would drain to an existing outlet north by Marina Parkway where metering facilities would be constructed. No detailed plans are available yet.

The project sewage generation would not significantly impact the City's capacity with the METRO system, and, until detailed plans for infrastructure become available, impacts to infrastructure are considered significant, but mitigable at the project level.

Water

Project impacts would be governed by two factors, the first being the existing infrastructure of water mains that would be providing water to the project site. The Sweetwater Authority has completed a project analysis which determined what improvements to the existing infrastructure would need to be completed in order for the system to provide the required 5,000 GPM for fire flow and 2,000 GPM for domestic demands. The results of the analysis indicated that the existing on-site and off-site water mains are inadequate to serve the project, thus causing potentially significant impacts to water service, and, to the City's threshold policy. However, the LCPR No. 8 text states that the "basic water service proposed for the area consists of 12 and 16-inch mains in "E" Street, Marina Parkway, "F" Street (Lagoon Drive), and "G" Street. The static water pressure would be 70 to 100 psi. A 14-inch waterline in "G" Street will connect the lines in Bay Boulevard and Marina Parkway. This pipeline is necessary to maintain a looped system during development of the project. An easement for pipeline operation shall be maintained even though the area might be fenced for security reasons by Rohr Industries." The City of Chula Vista Engineering Department and Sweetwater Authority must review the proposed infrastructure to determine whether the proposed system would adequately mitigate the potential water service impacts.

The LCPR No. 8 text does not quantify the amount of water necessary to fill the lagoons, yet it does say that the 10-acre lagoon would be salt water and would use wells to supply the water. A separate summary letter report (Geocon, 1990) references estimated water supply to be approximately 82 gallons per minute (gpm) in July, with an annual daily average of 50 gpm. Geocon prepared a limited hydrologic investigation to determine the available groundwater supply to support the proposed 10-acre salt water lagoon (this report is on file at the City of Chula Vista). Their investigation did not include the smaller 2.6 acre semi-public lagoon. The conclusion was tentative, based on the assumption that a number of wells (number not specified) would be completed to provide the required amount of water, and that aquifer conditions found at existing wells are representative of Midbayfront conditions. Based on completion of the wells, and an assumed positive result of these unknown conditions, Geocon believes that the supply requirements of the 10-acre lagoon could be met with wells.

The conclusion regarding level of impact cannot be made until further testing and verification of well supply can be made for both lagoons. Also, information must be provided to show the proposed well locations and engineering design of the circulation system. Until that time, a conclusion of a potentially significant impact to water must be made.

The second factor is the availability of water from the Sweetwater Authority. The size of the development would add to the area demand for water. The proposed project's impact on the regional water supply has been summarized in the table shown below. Projected consumption levels are shown according to type of use and are based on water usage generation rates provided by the Sweetwater Authority, a member of the San Diego County Water Authority (SDCWA). The Public/Quasi-Public use category was created by combining park acreage and the landscaped parking under the SDG&E transmission corridor.

| Proposed Use | Generation Rate | Units | Projected Consumption |
|--|----------------------------|--|--|
| Residential (high density) | 110 gallons/capita/ day | 1400 (2520 people) | 277,200 gal /day = 312.5 acre-feet/year |
| Hotel | 8.0 acre-feet/year | 1800 totaling 1,465,000 s.f. (33.63 acres) | 269 acre-feet/year |
| Commercial (retail and office) | 1.5 acre-feet/year | 790,000 s.f. (18.13 acres) | 27 acre-feet/year |
| Public/Quasi-Public (including parks) | 2.0 acre-feet/year | 30.8 acres | 61.6 acre-feet/year |
| Total Consumption | | | 670.1 acre-feet/year |

The project would incrementally contribute to a regionally significant demand on water resources. Southern California demand continues to increase, while supply from the Colorado River will continue to decrease (due to legal commitments to the Upper Basin). Currently, this situation is exacerbated by the drought the west and southwest are experiencing. Any additional demands on a supply which is currently considered inadequate (one which warrants mandatory conservation for the existing demand) represents an incremental contribution to a cumulatively significant impact on the Sweetwater Authority's ability to supply the existing and future demand of their District.

Schools

The project has the potential to produce approximately 1,413 elementary school children (Shurson, 1990). The children would be within the attendance areas of Mae L. Feaster Elementary School and Vista Square Elementary School. At the junior high school and high school levels the project would add approximately 406 students to Chula Vista Junior High School and Chula Vista High School enrollment totals.

As a result of the influx of school children to both school districts, significant impacts would occur that would decrease both Districts' ability to adequately serve the needs of the students. Additionally, the City's threshold standards would not be met.

Also, the location of I-5 between the project area and the schools would prohibit the feasibility of students walking to existing schools, and the potential transportation costs would be significant (Silva, 1989). Additional operating costs would include annual operating costs, and either relocatable classroom costs or permanent classroom costs. Finally, it should be noted that since the August 1990 Draft EIR was published, the SANDAG Source Point group has been researching the fact that new homes are not the only project aspects to be evaluated in estimating new student load. New jobs provided under Alternative 8 will also bring new residents to the area, even if they do not live on the Midbayfront. Similarly, all support/service areas will be expanded as a result of the new housing and employment opportunities - thus bringing yet additional families into the school system. This increases by a factor of more than three the number of students anticipated for elementary school enrollment over the number which would have originally been predicted (1,400 X 0.3); thus creating an even greater burden on over-taxed school districts (Shurson, 1991).

4.2.14 Traffic

Existing Setting

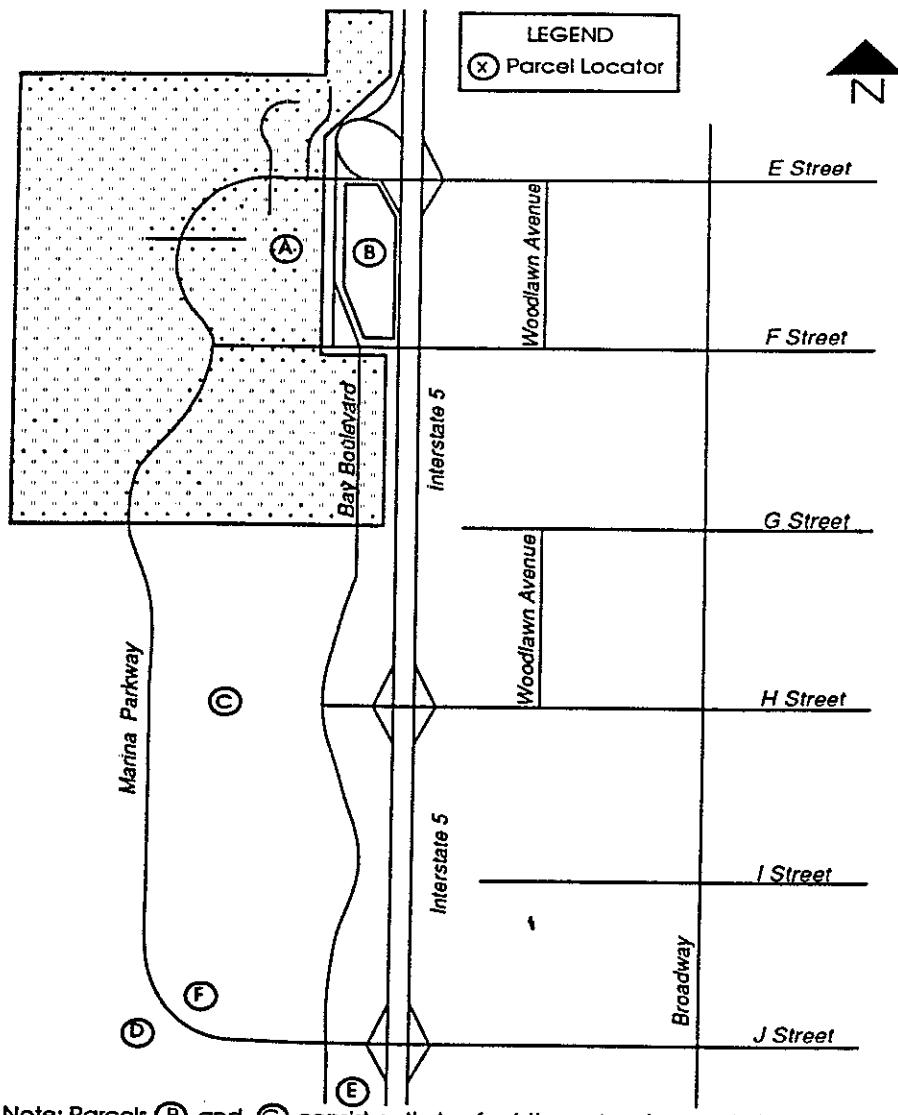
Alternative 8 traffic impacts were evaluated utilizing the same methodology and assumptions described in Volume II, Section 3.14 for the proposed project and the no project alternative. Issues addressed include trip generation and distribution, roadway segment analyses and intersection capacity utilization analyses. Future conditions are based upon a technical analysis of critical intersections using the Intersection Capacity Utilization (ICU) method. Critical signalized intersections which would be impacted by trolley gate operations are further analyzed using the "Operational Analysis" method from the 1985 Highway Capacity Manual (HCM).

Trip Generation

The trip generation and distribution projections for the site were analyzed for Alternative 8 and for other planned developments in the study area. The trip generation rates used are the same as those used in Volume II. Figure G-2 in Appendix H shows the project site plan and proposed land use.

Alternative 8 will result in an estimated trip generation potential of 38,125 trips per day. In comparison, the proposed project's estimated trips total 41,958. As such, Alternative 8 represents a reduction in land use intensity as well as a reduction in estimated trip generation potential of approximately 10 percent when compared to the proposed project.

The following graphic (Figure 4.2.14-I) illustrates the land use and trip generation estimates for the proposed project and Alternative 8. It is important to recognize that certain land uses may produce a greater number of daily trips when compared to other uses. However,



Note: Parcels **(B)** and **(C)** consist entirely of existing development. Portions of parcels **(D)** and **(F)** also contain existing development (See Figure 3-4).

LAND USE AND DAILY TRIP GENERATION

| <u>Locator</u> | <u>Description</u> | <u>Alt. 1 - No Build</u> | <u>Developer's Proposal</u> | <u>Alt. 2</u> |
|----------------|----------------------|--------------------------|-----------------------------|---------------|
| A | Midbayfront Project | 0 | 41,958 | 38,125 |
| D (TAZ 412) | New Marina | 1,364 | 1,364 | 1,364 |
| | Retail/Specialty | 1,600 | 1,600 | 1,600 |
| | Manufacture/Assembly | 600 | 600 | 600 |
| | Food Service | 3,000 | 3,000 | 3,000 |
| E (TAZ 449) | Office | 600 | 600 | 600 |
| | Restaurant | 400 | 400 | 400 |
| F (TAZ 402) | Light Industry | 2,400 | 2,400 | 2,400 |
| | Office | 600 | 600 | 600 |
| | Motel | 1,125 | 1,125 | 1,125 |
| TOTAL | | 11,689 | 53,647 | 49,814 |

Supplemental Traffic Data Analysis
JHK & Associates

PROPOSED BAYFRONT LAND USE AND DAILY TRIP GENERATION

Figure 4.2.14-I

when comparing the trip generation during the a.m. or p.m. peak hours, the relative relationship may not be the same. Thus, the traffic impact analysis is typically based on peak hour volumes at signalized intersections.

Trip Distribution

Traffic generated by the proposed project and "Other Planned Bayfront" developments was distributed on the transportation network. Approximately 75 percent of the bayfront projects were assigned to I-5, and the remaining 25 percent to the major cross-streets to reflect the amount of anticipated trip interaction between the project site and central Chula Vista. It was assumed that 75 percent of the project trips would pass through I-5 and the "E" Street interchange with 54 percent of those vehicles going north on I-5, 36 percent going south on I-5, and 10 percent going east on "E" Street.

Project-generated trips were distributed to the other streets as follows: 10 percent to "F" Street, 5 percent to "H" Street, and 10 percent to "J" Street. Trips from the project site at the "H" and "J" Street interchanges were distributed southbound on I-5 and eastbound on the cross streets. Furthermore, all project-generated trips assigned to the "E" and "H" Street interchanges were distributed onto Bay Boulevard (for north/south distribution), and trips assigned to the "J" Street interchange were distributed onto Marina Parkway (for southern distribution).

The projected ADTs resulting from adding all new bayfront traffic to existing traffic are shown in Figure 4.2.14-II for the No-Project Alternative and in Figure 4.2.14-III for Alternative 8.

Impacts

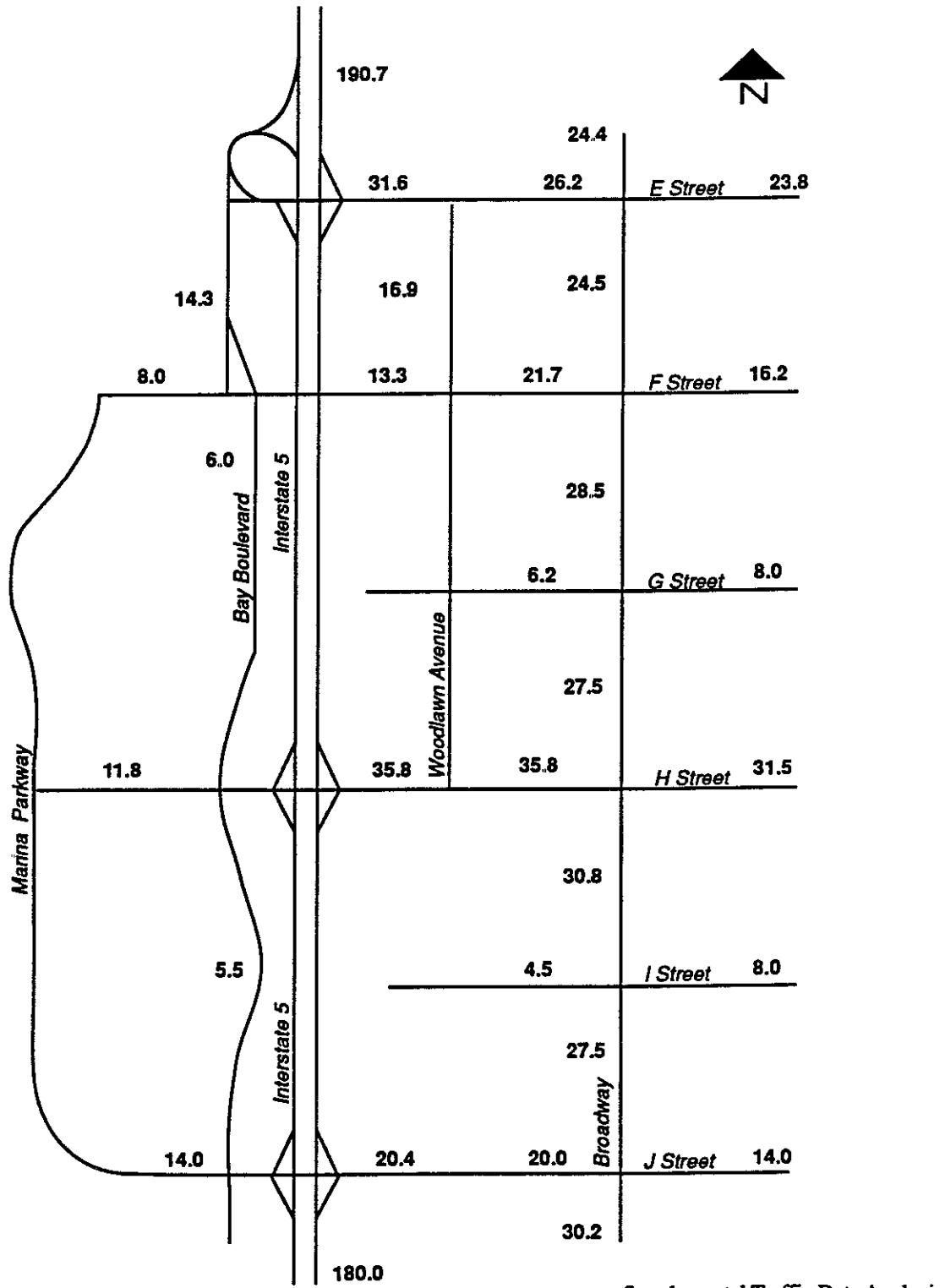
Roadway Segment Analysis

The volume-to-capacity ratios for the volumes projected for Alternative 8 for Year 2000 were used to determine future levels-of-service. These are presented below, along with the No-Project and the Proposed Project alternatives for purposes of comparison:

Alternative 1 - No Build

Under Alternative 1, the roadway segments that experience a level-of-service below the City of Chula Vista operating standards of LOS C or better include:

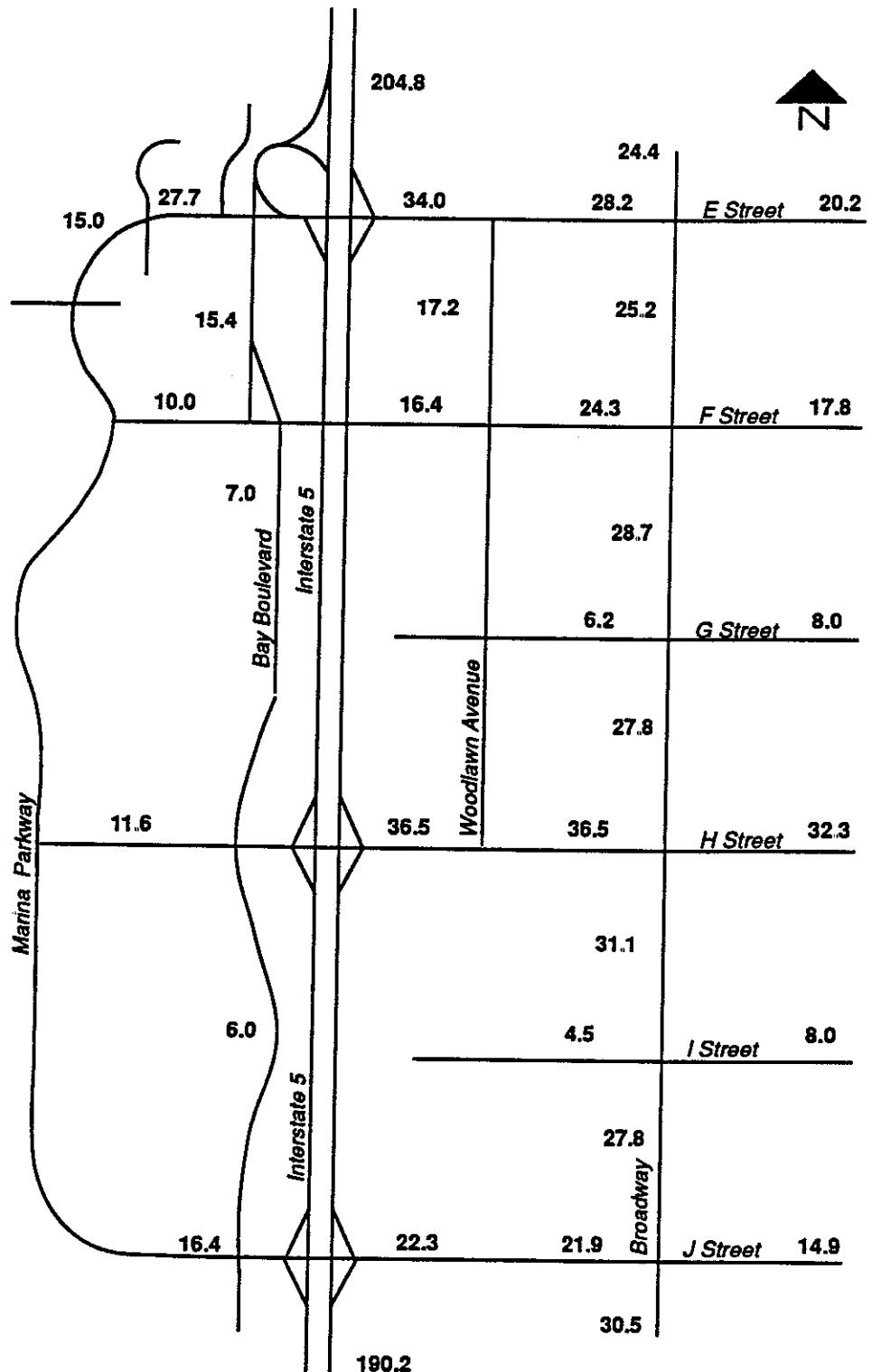
- "F" Street between 5th Avenue and Broadway (LOS F)
- Broadway between "H" and "I" Streets (LOS D)
- Broadway between "J" and "K" Streets (LOS D)
- Bay Boulevard between "E" and "F" Streets (LOS E)



Supplemental Traffic Data Analysis
JHK & Associates

Figure 4.2.14-II

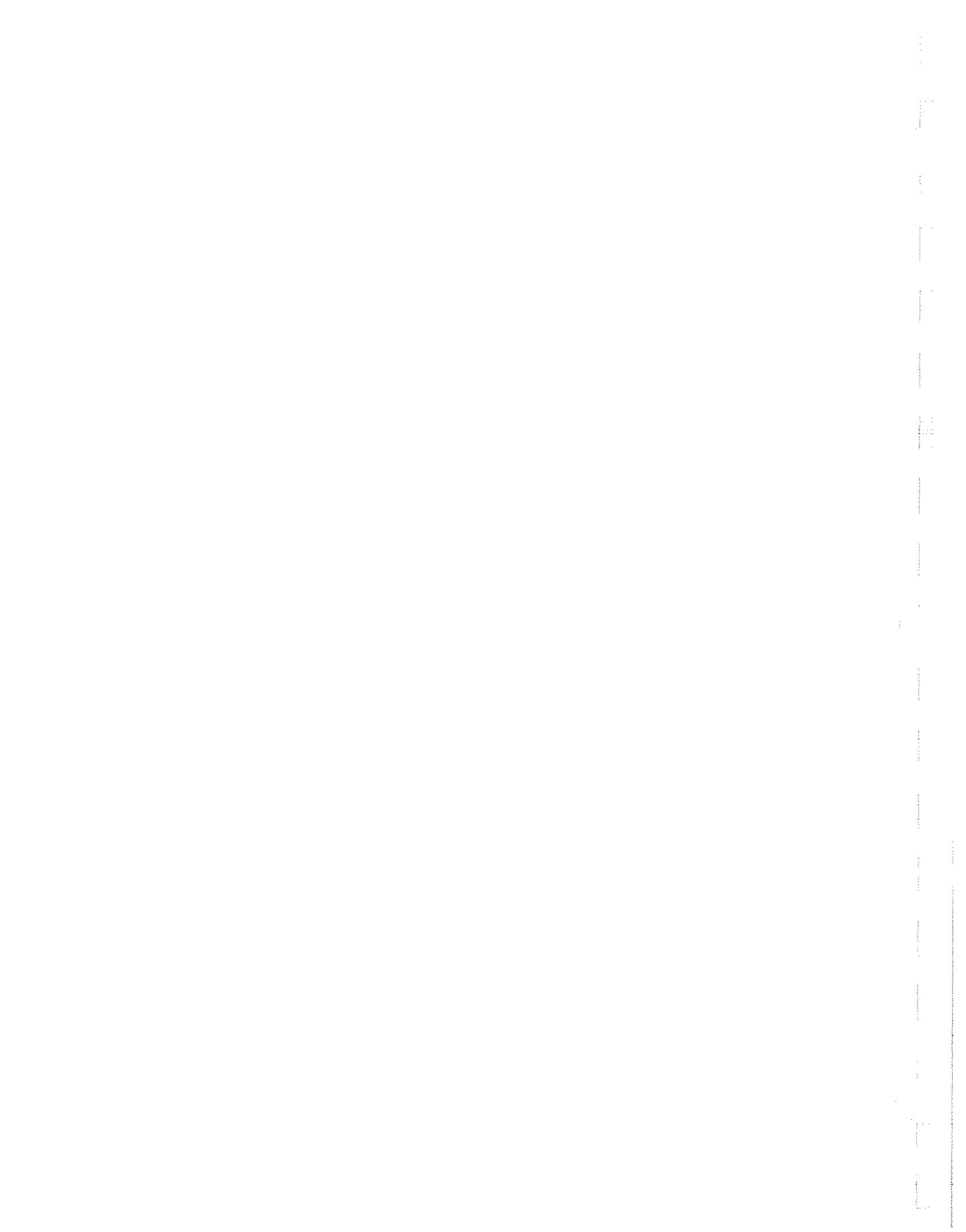
**PROJECTED ADT (IN THOUSANDS) AT BAYFRONT BUILDOUT
NO BUILD/ALTERNATIVE 1
YEAR 2000**



Supplemental Traffic Data Analysis
JHK & Associates

Figure 4.2.14-III

**PROJECTED ADT (IN THOUSANDS) AT BAYFRONT BUILDOUT
ALTERNATIVE 8
YEAR 2000**



Proposed Project

Under the proposed project, the following roadway segments do not meet the City of Chula Vista operating standard of LOS C or better:

- "F" Street between 5th Avenue and Woodlawn Avenue (LOS F,D)
- Broadway between "H" and "I" Streets (LOS D)
- Broadway between "J" and "K" Streets (LOS D)
- Bay Boulevard between "E" and "F" Streets (LOS F)

It is important to note that the segment of "F" Street between Broadway and Woodlawn Avenue declined from acceptable levels-of-service under the Alternative 1 to unacceptable under the proposed project. All other segments were found to be acceptable under future conditions (Year 2000) for the proposed project.

Alternative 8

Under Alternative 8, the following roadway segments do not meet the City of Chula Vista operating standard of LOS C or better:

- "F" Street between 5th Avenue and Woodlawn Avenue (LOS F, D)
- Broadway between "H" and "I" Streets (LOS D)
- Broadway between "J" and "K" Streets (LOS D)
- Bay Boulevard between "E" and "F" Streets (LOS F)

This analysis revealed that in terms of roadway segment capacity, the reduction in the amount of traffic generated under Alternative 8 was not sufficient to prevent the degradation in levels-of-service on critical segments within the study area.

Intersection Capacity Utilization (ICU) Analysis Assuming Anticipated Geometrics

Projected Year 2000 turning movement volumes were used to determine future levels-of-service at the key intersections. The resulting levels-of-service estimates for the no-project alternative, the proposed project, and Alternative 8 are summarized in Table 4.2.14-1. The levels-of-service predicted in the following section are based on future geometric conditions without project mitigation. Then, the Planned Roadway Improvements listed in the following section are added one phase at a time and the resulting improvements to the levels-of-service are described.

Alternative 1 - No-Build

The predicted intersection levels-of-service were analyzed under Year 2000 conditions for Alternative 1. This analysis revealed that during the a.m. peak hour all study area intersections will operate at LOS C or better. During the p.m. peak hour the following intersections would operate at unacceptable (LOS D or worse - arterial intersections, LOS E or worse - freeway ramp intersections) levels-of-service:

Table 4.2.14-1
PROJECTED LEVELS OF SERVICE
FUTURE CONDITIONS YEAR 2000
WITH ORIGINAL DISTRIBUTION ASSUMPTIONS

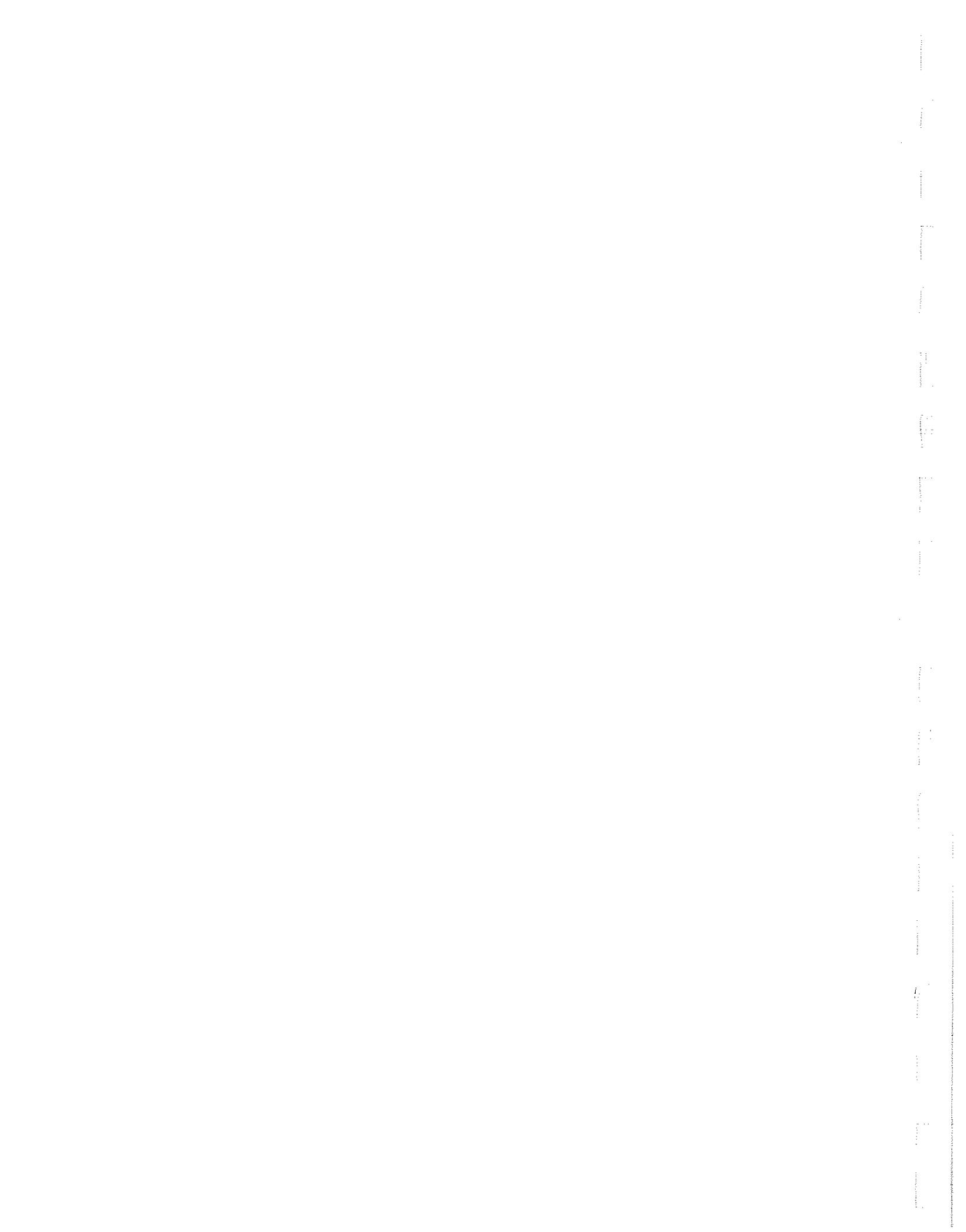
| AM Peak Hour | | | | | | | | | |
|-----------------|-------------|--------------------|-----|----------------------------|-----|---------------------|-----|---------------|-----|
| Intersection | | Existing Year 1989 | | Future Year 2000 | | | | | |
| | | | | Alternative 1/ No-Build | | Proposed Project | | Alternative 8 | |
| N/S Street | E/W Street | ICU | LOS | ICU | LOS | ICU | LOS | ICU | LOS |
| Bay Bl/I-5 SB | E St/Marina | 0.34 | A | 0.52 | A | 0.74 | C | 0.83 | D |
| I-5 NB Ramp | E Street | 0.39 | A | 0.71 | C | 1.05 | F | 1.48 | F |
| Maj. East Entry | Marina Pkwy | - | - | - | - | 0.48 | A | 0.47 | A |
| Marina Pkwy | Hotel Entry | - | - | - | - | 0.4 | A | 0.35 | A |
| I-5 SB Ramp | H Street | 0.35 | A | 0.38 | A | 0.38 | A | 0.43 | A |
| I-5 NB Ramp | H Street | 0.39 | A | 0.66 | B | 0.66 | B | 0.62 | B |
| Bay Blvd | H Street | 0.47 | A | 0.58 | A | 0.6 | A | 0.55 | A |
| I-5 SB Ramp | J Street | 0.34 | A | 0.41 | A | 0.43 | A | 0.41 | A |
| I-5 NB Ramp | J Street | 0.31 | A | 0.61 | B | 0.66 | B | 0.65 | B |
| Bay Blvd | J St/Marina | 0.45 | A | 0.59 | A | 0.64 | B | 0.52 | A |
| * Woodlawn | E Street | 0.52 | A | 0.58 | A | 0.78 | C | 0.74 | C |
| * Broadway | E Street | 0.62 | B | 0.68 | B | 0.74 | C | 0.69 | B |
| * Woodlawn | F Street | 0.24 | A | 0.59 | A | 0.68 | B | 0.64 | B |
| * Broadway | F Street | 0.37 | A | 0.63 | B | 0.73 | C | 0.68 | B |
| * Broadway | H Street | 0.42 | A | 0.59 | A | 0.83 | D | 0.69 | B |

| P.M. Peak Hour | | | | | | | | | |
|-----------------|-------------|--------------------|-----|----------------------------|-----|---------------------|-----|---------------|-----|
| Intersection | | Existing Year 1989 | | Future Year 2000 | | | | | |
| | | | | Alternative 1/ No-Build | | Proposed Project | | Alternative 8 | |
| N/S Street | E/W Street | ICU | LOS | ICU | LOS | ICU | LOS | ICU | LOS |
| Bay Bl/I-5 SB | E St/Marina | 0.74 | C | 0.73 | C | 1.02 | F | 1.05 | F |
| I-5 NB Ramp | E Street | 0.63 | B | 0.81 | D | 1.38 | F | 1.3 | F |
| Maj. East Entry | Marina Pkwy | - | - | - | - | 0.63 | B | 0.42 | A |
| Marina Pkwy | Hotel Entry | - | - | - | - | 0.42 | A | 0.4 | A |
| I-5 SB Ramp | H Street | 0.71 | C | 0.76 | C | 0.76 | C | 0.71 | C |
| I-5 NB Ramp | H Street | 0.65 | B | 0.77 | C | 0.78 | C | 0.78 | C |
| Bay Blvd | H Street | 0.51 | A | 0.56 | A | 0.64 | B | 0.54 | A |
| I-5 SB Ramp | J Street | 0.63 | B | 0.76 | C | 0.81 | D | 0.8 | D |
| I-5 NB Ramp | J Street | 0.43 | A | 0.69 | B | 0.79 | C | 0.79 | C |
| Bay Blvd | J St/Marina | 0.52 | A | 0.74 | C | 0.79 | C | 0.63 | B |
| * Woodlawn | E Street | 0.76 | C | 0.75 | C | 0.84 | D | 0.78 | C |
| * Broadway | E Street | 0.79 | C | 0.94 | E | 1.05 | F | 1.04 | F |
| * Woodlawn | F Street | 0.39 | A | 0.58 | A | 0.66 | B | 0.63 | B |
| * Broadway | F Street | 0.69 | B | 0.82 | D | 0.91 | E | 0.84 | D |
| * Broadway | H Street | 0.8 | D | 0.87 | D | 0.98 | E | 0.95 | E |

* Additional intersections added to the Project Study area (January 1991).

Notes:

1. The input volume for the northbound right turn at the intersection of Bay Blvd/I-5 SB off-ramp and E Street/Marina Parkway was reduced by the amount of the westbound left turn volume to account for overlapping of phases for these two movements.
2. The input volume for the westbound right turn at the intersection of E Street and I-5 NB ramps was reduced by one half of the total northbound approach volume. This assumes that the northbound through movement will be prohibited, and the westbound right-turn lane will be of sufficient length to avoid interference from the queue for westbound through traffic.



- Broadway/"E" Street (LOS E, ICU 0.94)
- Broadway/"F" Street (LOS D, ICU 0.82)
- Broadway/"H" Street (LOS D, ICU 0.87)

The remaining intersections are predicted to operate at acceptable levels-of-service during the p.m. peak hour.

Proposed Project

The Year 2000 condition was analyzed with the traffic generated by the proposed project added to the No-Build condition. This analysis revealed that similar for Alternative 1, all study area intersections will operate at LOS C or better during the a.m. peak hour with the exception of Broadway/"H" Street which will operate at LOS D. During the p.m. peak hour, with the proposed project generated traffic added to the network the following intersections will operate at unacceptable levels-of-service (LOS D or worse - arterial intersections, LOS E or worse - freeway ramp intersections).

- I-5 Southbound Ramp/"E" Street (LOS F, ICU 1.02)
- I-5 Northbound Ramp/"E" Street (LOS F, ICU 1.38)
- Woodlawn Avenue/"E" Street (LOS D, ICU 0.84)
- Broadway/"E" Street (LOS F, ICU 1.05)
- Broadway/"F" Street (LOS E, ICU 0.91)
- Broadway/"H" Street (LOS E, ICU 0.98)

The remaining study area intersections are expected to operate at acceptable levels during the p.m. peak hour.

Alternative 8

The Year 2000 condition was analyzed with the Alternative 8 traffic added to the network. As discussed earlier, this alternative is a reduction in intensity of use, resulting in approximately 10 percent fewer trips than the proposed project. Like the Year 2000 conditions under Alternative 1 during the a.m. peak hour, all intersections will operate within the City of Chula Vista standards of operation (LOS C or better). During the p.m. peak hour, the following intersections are expected to operate at unacceptable levels (LOS D or worse - arterial intersections, LOS E or worse - freeway ramp intersections), despite the 10 percent reduction in trips:

- I-5 Southbound Ramp/"E" Street (LOS F, ICU 1.05)
- I-5 Northbound Ramp/"E" Street (LOS F, ICU 1.30)
- Broadway/"E" Street (LOS F, ICU 1.04)
- Broadway/"F" Street (LOS D, ICU 0.84)
- Broadway/"H" Street (LOS E, ICU 0.95)

The remaining intersections are expected to operate at acceptable levels-of-service during the p.m. peak hour. Table 4.2.14-1 provides a summary of the a.m. and p.m. peak periods

for the existing and Year 2000 conditions under Alternative 8, the No-Project alternative and the proposed project.

Intersection Capacity Utilization (ICU) Analysis Assuming Mitigation

Because the analysis of project generated traffic, assuming anticipated geometrics, resulted in unacceptable levels-of-service, additional levels-of-service calculations were undertaken by adding the Planned Roadway Improvements listed below one phase at a time. Table 4.2.14-3 shows projected levels-of-service with phased mitigation.

Planned Roadway Improvements

- Phase 1 Widen westbound "E" Street from the northbound I-5 on-ramp to provide a separate right-turn lane from westbound "E" Street to the I-5 northbound on-ramp. This separate right turn lane should be a minimum of 250 feet in length.
- Phase 2 Widen the I-5 northbound off-ramp at "E" Street to provide an exclusive left-turn lane, a share left- and right-turn lane and an exclusive right-turn lane.
- Phase 3 Restripe the "E" Street overpass to provide two through lanes per direction, and two left-turn lanes from eastbound "E" Street to the I-5 northbound on-ramp.
- Phase 4 Widen northbound Bay Boulevard to provide an exclusive left-turn lane and two right-turn lanes.

It is important to note that CalTrans has not approved the restriping of the Interstate 5 overcrossing at "E" Street identified under Phase 3. The primary reason that approval has not been granted by CalTrans is that sub-standard lane widths are included in the proposed restriping plan. Since this overcrossing is under the jurisdiction of CalTrans, their approval of any modification to the traffic flow plan at this interchange is required. In addition, the feasibility of the widening of Bay Boulevard to include three northbound lanes, identified under Phase 4, has not been demonstrated.

Even assuming incorporation of the Planned Roadway Improvements into the ICU analysis, the intersection "E" Street and the I-5 southbound ramp remained at an unacceptable level-of-service under the proposed project and Alternative 8. Due to this "*oversaturation*" at the intersection of "E" Street and the I-5 southbound ramp, additional traffic was redistributed from the "E" Street interchange south to the "H" Street interchange for the p.m. peak period. The new levels-of-service resulting from this redistribution are summarized below and are shown in Tables 4.2.14-2 and 4.2.14-3.

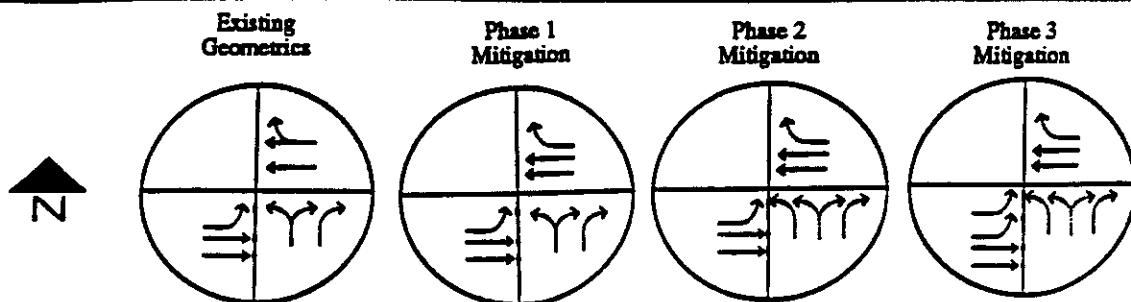
Alternative 1 - No-Build

Under Alternative 1, the I-5 northbound ramp at "E" Street will operate at level-of-service C in the p.m. peak hour following implementation of the measures identified as Phase 1.

Table 4.2.14-2
PROJECTED LEVELS OF SERVICE WITH PHASED MITIGATION
FUTURE CONDITIONS - YEAR 2000

I-5 NORTHBOUND/"E" STREET

| Land Use Alternative | Without Mitigation | | With Mitigation Phase 1 | With Mitigation Phase 2 | With Mitigation Phase 3 |
|----------------------|--------------------|--------|----------------------------|----------------------------|----------------------------|
| | AM | PM | | | |
| | Proposed Project | 1.05 F | 1.38 F | 1.37 F | 1.18 F |
| Alt 1 | 0.71 C | 0.81 D | 0.73 C | 0.70 C | 0.51 A |
| Alt 8 | 1.48 F | 1.30 F | 1.21 F | 1.05 F | 0.74 C |



I-5 SOUTHBOUND/"E" STREET

| Land Use Alternative | Without Mitigation | | With Redistribution PM | With Mitigation PM | With Mitigation And Redistribution PM |
|----------------------|--------------------|--------|---------------------------|-----------------------|---|
| | AM | PM | | | |
| Proposed Project | 0.74 D | 1.02 F | 0.93 E | 0.99 E | 0.88 D |
| Alt 1 | 0.52 A | 0.73 C | 0.64 B | 0.74 C | 0.64 B |
| Alt 8 | 0.76 C | 1.05 F | 0.91 E | 1.02 F | 0.87 D |

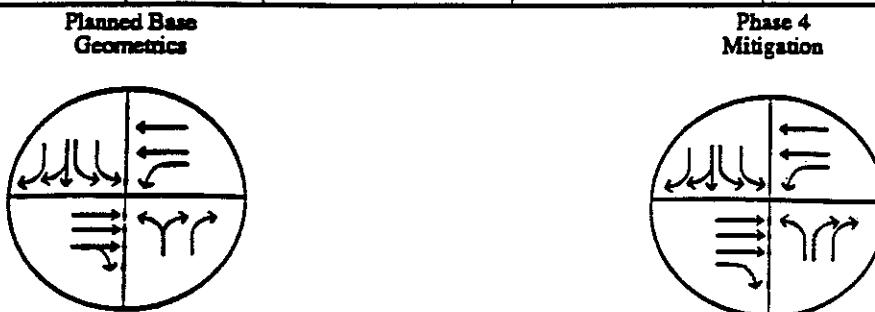


Table 4.2.14-3

**PROJECTED LEVELS OF SERVICE
FUTURE CONDITIONS YEAR 2000
WITH REDISTRIBUTION ASSUMPTIONS**

| Intersection | | P.M. Peak Hour | | | | | | | |
|---------------|-------------|------------------|-----|-----------------------------------|-----|---------------|-----|--------------------------------|-----|
| | | Future Year 2000 | | | | | | | |
| N/S Street | E/W Street | Proposed Project | | Proposed Project Redistributed | | Alternative 8 | | Alternative 8 Redistributed | |
| | | ICU | LOS | ICU | LOS | ICU | LOS | ICU | LOS |
| Bay Bl/I-5 SB | E St/Marina | 1.02 | F | 0.93 | E | 1.05 | F | 0.91 | E |
| I-5 SB Ramp | H Street | 0.76 | C | 0.87 | D | 0.71 | C | 0.79 | C |
| Bay Blvd | H Street | 0.64 | B | 0.77 | C | 0.54 | A | 0.73 | C |

Note:

1. The input volume for the northbound right turn at the intersection of Bay Blvd/I-5 SB off-ramp and E Street/Marina Parkway was reduced by the amount of the westbound left-turn volume to account for overlapping of phases for these two movements. This reduction in the northbound right-turn volume is beyond the 35% reduction applied during the distribution of trips to account for diversion of traffic to H Street from the E Street interchange.

Source: JHK & Associates.

(1)

Therefore, no additional mitigation is necessary at the I-5 northbound ramp at "E" Street under Alternative 1. Further, no additional mitigation was tested for the I-5 southbound ramp at "E" Street under this alternative, because without mitigation the level of service at that ramp in the p.m. peak hour is C.

Proposed Project

Under the proposed project, the I-5 northbound ramp at "E" Street will operate at level-of-service D in the p.m. peak hour following implementation of the measures identified as Phases 1, 2 and 3. The I-5 southbound ramp at "E" Street will operate at level-of-service D following implementation of the measures identified under Phase 4 and assuming redistribution of trips from the "E" Street interchange.

Alternative 8

Under Alternative 8, the I-5 northbound ramp at "E" Street will operate at level-of-service C in the p.m. peak hour following implementation of the measures identified as Phases 1-3. The I-5 southbound ramp at "E" Street will operate at level-of-service D following implementation of the measures identified under Phase 4 and assuming redistribution of trips from the "E" Street interchange. Also, as shown on Table 4.2.14-3, the levels-of-service at the "H" Street/I-5 southbound ramp and the "H" Street/Bay Boulevard intersection are C during the p.m. peak hour following redistribution of trips from the "E" Street interchange.

Mitigation

The mitigation measures for Alternative 1 and the proposed project are provided in Volume II, Section 3.14. The required mitigation for Alternative 8 is summarized below.

Alternative 8

Phases 1-3 of the Planned Roadway Improvements listed beginning on page 4-26 must be implemented to achieve the cited impacts associated with Alternative 8. The measures identified for Phases 2 and 3 must be approved by CalTrans and the City of Chula Vista prior to accepting them as project mitigation. In addition, the feasibility of the Phase 4 measure must be demonstrated. So, under Alternative 8, the impacts at the I-5 northbound and southbound ramps at "E" Street remain significant and not mitigated at the plan level.

Off-Site Traffic Mitigation Measures

In addition to the Planned Roadway Improvements, the following off-site traffic mitigation measures would be required to achieve a level-of-service C at the identified intersections. Table 4.2.14-4 summarizes the levels-of-service at the intersections within the expanded study area before and after implementation of the mitigation measures.

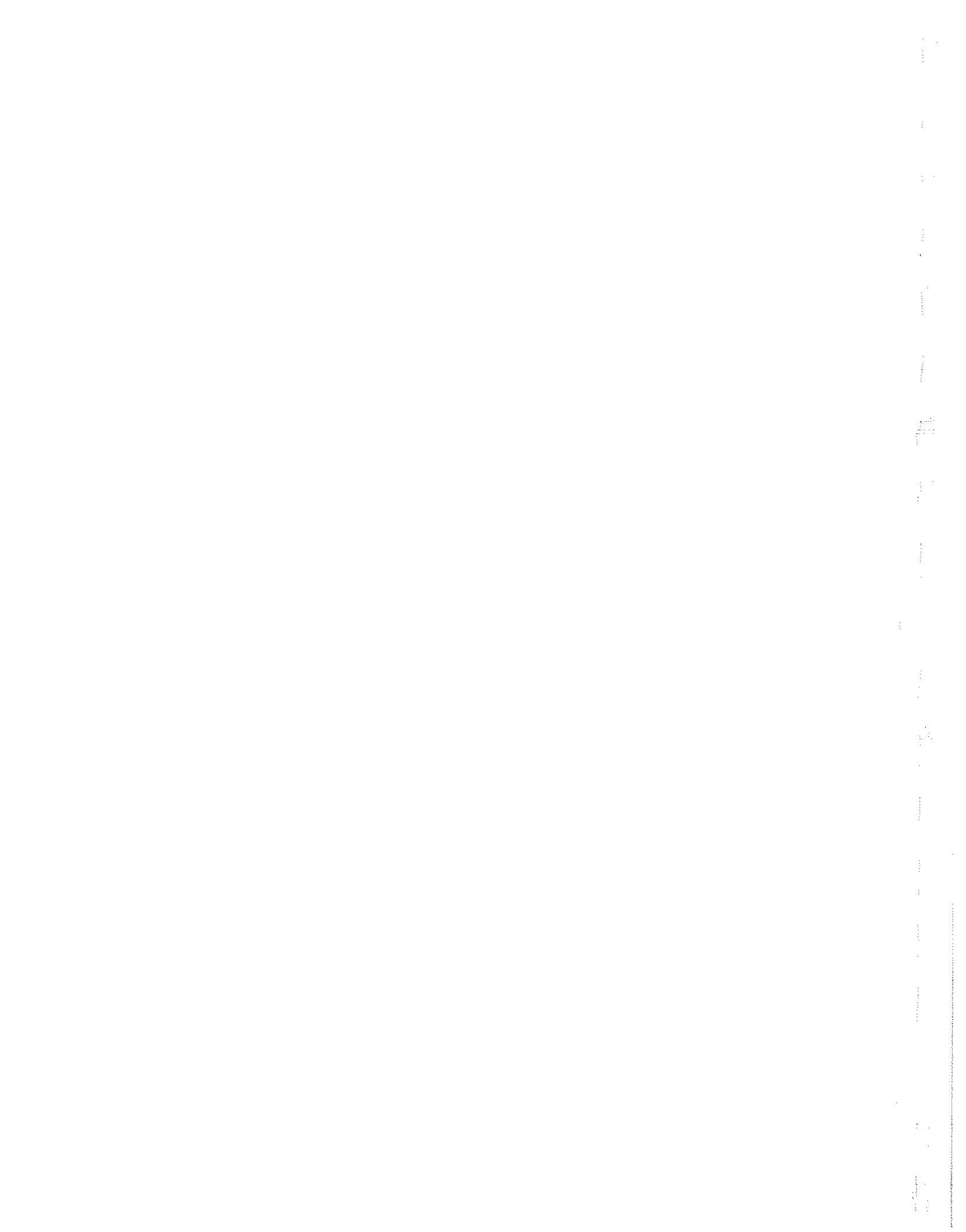


Table 4.2.14-4**PROJECTED LEVELS OF SERVICE WITH MITIGATION
FUTURE CONDITIONS YEAR 2000**

| P.M. Peak Hour | | | | | | | | | |
|----------------|------------|--------------------|-----|-----------------|-----|--------------------|-----|-----------------|-----|
| Intersection | | Proposed Project | | | | Alternative 8 | | | |
| | | Without Mitigation | | With Mitigation | | Without Mitigation | | With Mitigation | |
| N/S Street | E/W Street | ICU | LOS | ICU | LOS | ICU | LOS | ICU | LOS |
| Woodlawn Ave. | E Street | 0.84 | D | 0.78 | C | 0.78 | C | N/A | N/A |
| Broadway | E Street | 1.05 | F | 0.79 | C | 1.04 | F | 0.76 | C |
| Broadway | F Street | 0.91 | E | 0.88 | D | 0.84 | D | 0.79 | C |
| Broadway | H Street | 0.98 | E | 0.75 | C | 0.95 | E | 0.74 | C |

Source: JHK & Associates.

1. Broadway/"E" Street
Westbound: Construction of an additional left-turn lane and an exclusive right-turn only lane.
Eastbound: Construction of an additional left-turn lane and an exclusive right-turn only lane.
2. Broadway/"F" Street
Westbound: Restriping to provide an exclusive right-turn only lane.
Eastbound: Restriping to provide an exclusive right-turn only lane.
3. Broadway/"H" Street
Westbound: Construction to provide an additional through lane.
Eastbound: Construction to provide an additional through lane and an exclusive right-turn only lane.

Analysis of Significance

Development under Alternative 8 would result in significant impacts to intersection capacities in the project vicinity. The following impacts are significant and not mitigated at the plan level, but appear to have potentially feasible mitigation available.

The feasibility of these measures must, however, be confirmed prior to accepting the measures as appropriate mitigation at the project level.

Signalized Arterial Intersections

- Broadway/"E" Street
 - Without Mitigation (LOS F, ICU 1.04)
 - With Mitigation (LOS C, ICU 0.76)

Mitigation Measure:

Broadway/"E" Street
Westbound: Construction of an additional left-turn lane and an exclusive right-turn only lane.
Eastbound: Construction of an additional left-turn lane and an exclusive right-turn only lane.

- Broadway/"F" Street
 - Without Mitigation (LOS D, ICU 0.84)
 - With Mitigation (LOS C, ICU 0.79)

Mitigation Measure:

Broadway/"F" Street
Westbound: Restriping to provide an exclusive right-turn only lane.
Eastbound: Restriping to provide an exclusive right-turn only lane.

- Broadway/"H" Street
 - Without Mitigation (LOS E, ICU 0.95)
 - With Mitigation (LOS C, ICU 0.74)

Mitigation Measure:

Broadway/"H" Street

Westbound: Construction to provide an additional through lane.

Eastbound: Construction to provide an additional through lane and an exclusive right-turn only lane.

Signalized Freeway Ramp Intersections

- I-5 Northbound Ramp/"E" Street
 - Without Mitigation (LOS F, ICU 1.30)
 - With Mitigation (LOS C, ICU 0.74)

Mitigation Measure:

I-5/"E" Street Interchange

Northbound I-5 Off-Ramp at "E" Street: Construction of an additional right-turn only lane.

Eastbound "E" Street: Construction of double left-turn lanes to I-5 northbound on-ramp (or restriping the "E" Street overcrossing).

- I-5 Southbound Ramp/"E" Street
 - Without Mitigation (LOS F, ICU 1.05)
 - With Mitigation (LOS F, ICU 1.02)
 - Without Mitigation With Redistribution (LOS E, ICU .91)
 - With Mitigation and Redistribution (LOS D, ICU .87)

Mitigation Measure:

Widen northbound Bay Blvd. to provide an exclusive left-turn lane and two right-turn lanes.

Widen eastbound Marina Parkway to provide three through lanes and a right-turn only lane.

Finally, the gate down time of the San Diego Trolley would worsen the "E" Street impacts; it is estimated that this down time would account for an overall reduction of intersection capacity at the "E" Street/I-5 northbound ramp signalized intersection.

5.0 ALTERNATIVE 9 - ALTERNATIVE DEVELOPED IN RESPONSE TO PUBLIC COMMENT

5.1 DESCRIPTION OF ALTERNATIVE 9

Alternative 9 was developed in response to comments raised by the U.S. Fish and Wildlife Service, the State of California Department of Fish and Game, the Environmental Health Coalition, the California Coastal Commission, and the Bayfront Conservancy Trust. Comments that specifically suggested changes in design (e.g., building heights and/or locations) included Comments B11, B51, C10, F1, F5, F12, T28 and W59.

In addition, a number of comments were received that addressed park uses (Comments B51, F5, N31, W63, W69) and parking (N30 and W70). Alternative 9, described below, was designed to respond to these public comments to the extent possible at the plan level of analysis. This alternative represents a further refinement of Alternatives 7 and 7A, previously addressed in Volume II.

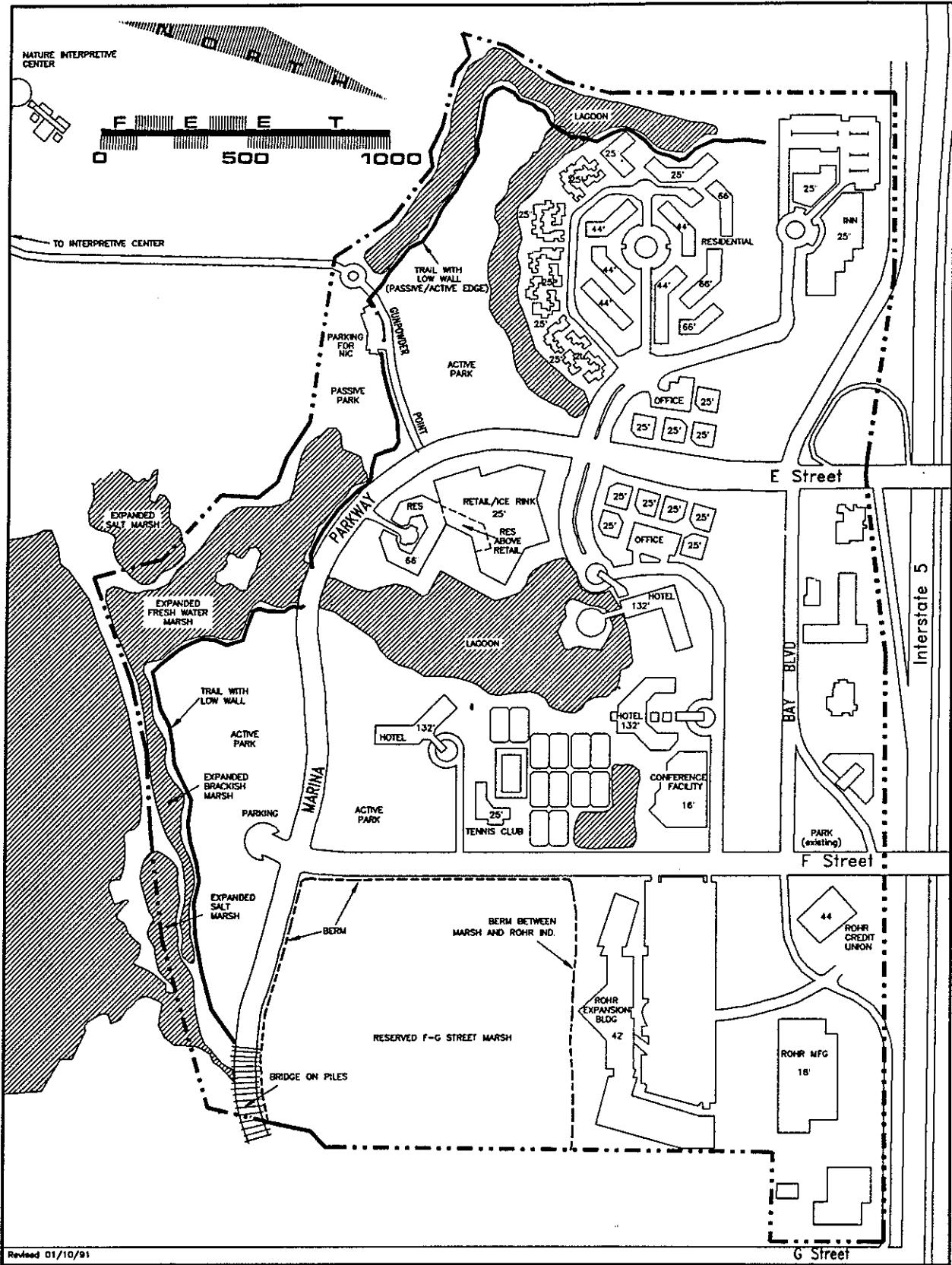
Alternative 9 would allow up to 2.5 million square feet of development, and is consistent with the overall density allowed by the existing LCP. In comparison, Alternative 9 is 1.7 million square feet smaller (lower in density) than the proposed project and 1.4 million square feet less than that proposed under Alternative 8, the applicant's revised project.

Figure 5.1-I illustrates the building locations and heights associated with Alternative 9, as well as the planned land uses. Building heights in Alternative 9 are similar to those previously described for Alternative 7. Alternative 9 would allow up to three 12-story hotels, three 6-story residential buildings and one five-story residential building. Alternative 9 would also allow up to six 4-story residential buildings and the 3-story Rohr professional office complex. All other buildings in Alternative 9 are 1 to 2 stories in height.

The locations of the Alternative 9 buildings provide a larger buffer between project developments and sensitive biological resources than the proposed project or other alternatives. Similar to Alternative 7, all development in Alternative 9 would be east of Marina Parkway. Alternative 9 also provides increased buffers between the Sweetwater National Wildlife Refuge and sensitive biological species through the creation of a semi-public lagoon along the northern and western edges of the North Residential Area, as well as the creation of an expanded salt water marsh and brackish water marsh between the park lands, located west of marina parkway, and the San Diego Bay.

Alternative 9 provides for passive park uses within a 200-foot corridor adjacent to the inner edge of the 100-foot wide refuge buffers. Active parks would be located east of the expanded marshes, and between the Northern Residential buildings and Marina Parkway. Figure 5.1-I shows the relative locations of active and passive parklands. With respect to parking, Alternative 9 provides for an additional 46 spaces for the Chula Vista Nature Interpretative Center approximately 100 feet from the National Wildlife Refuge Boundary as well as additional park visitor parking west of Marina Parkway.

RESUBMITTAL #8



ALTERNATIVE 9

PUBLIC COMMENT

Figure 5.1-I

5.2 IMPACTS OF ALTERNATIVE 9

5.2.1 Geology, Soils, Groundwater

This alternative could result in impacts similar to those described for the proposed project, including ground settlement, seismic hazards, dewatering for subterranean parking and on-site and off-site pipeline grading.

This alternative would reduce the ground settlement impacts substantially by keeping development off large areas of compressible soils which are west of Marina Parkway.

5.2.2 Hydrology/Water Quality

Hydrology and water quality impacts would be similar, overall, to those previously described for the proposed project and other alternatives. This alternative includes greater areas of man-made lagoons and salt water marshes; and as such will require greater amounts of water. This alternative assumes, however, that the lagoons would be filled with San Diego Bay water, and thereby would avoid the groundwater impacts from the lagoons that have been previously discussed for the proposed project. Feasible mitigation measures are available to reduce all impacts to a level below significant for this alternative.

5.2.3 Visual Aesthetics/Community Character

The visual aesthetic effects of Alternative 9 on existing views and community character would be very similar to those described for Alternative 7. Although some minor differences would be seen between Alternative 7 and Alternative 9, Plates 21 through 28 of Volume II are considered to be representative of the types of structures and their physical dominance that would be perceived from the key public observation points (also described in Volume II). Overall, Alternative 9 would significantly reduce the visual dominance of the project from the Chula Vista Interpretive Center; as well as from "E" Street and from I-5, as compared to the applicant's proposed project or revised project, Alternative 8. Similar to Alternative 7, Alternative 9 would provide substantially greater on-site opportunities for public enjoyment of the City's bayside setting. In comparison to the proposed project or Alternative 8, Alternative 9 provides for more public parklands along the bay, increased water features and an increased potential for easy access to the parking at the bayfront.

5.2.4 Conversion of Agricultural Lands

The impact of Alternative 9 would be the same as the proposed project and all other alternatives. The project would provide an incremental contribution to a regionally significant loss of agricultural lands to urban development.

5.2.5 Air Quality

Air quality impacts would be reduced by almost half due to the reduction in trips, and by possibly more than half due to the elimination of the co-generation facility. Despite this, any contribution to the overload currently suffered by the San Diego Air Basin would result

in an incremental local contribution to a cumulatively significant regional problem, which has been considered significant at a project level in a recent court case (King's County Farm Bureau vs. City of Hanford, 1990).

5.2.6 Noise

Noise impacts would be reduced from both the proposed project and Alternative 8 due to the reduction in traffic. Overall, noise impacts are considered to be less than significant. Other noise impacts from traffic on I-5 can be feasibly mitigated for both the proposed project and Alternative 9.

5.2.7 Biological Resources

Alternative 9 was developed by the City's environmental consultants to incorporate input received in public and agency comments on the August 1990 DEIR. This alternative maintains the density of use identified for Alternative 7a. This alternative was primarily driven by biological concerns and would be anticipated to include all design/management and mitigation measures outlined for the proposed project. The comments that Alternative 9 were specifically designed to address related to:

- Increased building setbacks
- Additional buffering of active recreation
- Additional integration of the "F" & "G" Street Marsh with San Diego Bay and the "E" Street Marsh
- Increased buffering of the Sweetwater Marsh from the project
- Avoidance of flight patterns

Alternative 9 shifted the taller buildings from the western portions of the bayfront toward the more eastern areas. In addition, this alternative moved water features from the inner portion of the development to the outer areas, thus creating additional water buffers (extremely effective against mammalian predators and human encroachment) between development and parklands and the NWR. In order for this to be maximally effective, the plan would require some similar complementary work within the refuge buffer area. This alternative defines clearly the passive versus active use areas within the public parks. The issues of joining of the "F" & "G" Street Marsh with the bay and "E" Street Marsh have been addressed through use of a piling supported bridge at Marina Parkway and additional wetland creation to join the "F" & "G" Street Marsh connector channel to a non-active portion of the public lagoon and an extended arm of the "E" Street Marsh.

This plan incorporates considerable resource protection and enhancement values (i.e., expanded wetlands and low disturbance waterways and upland sage and succulent scrub habitats) not found in most of the other alternatives. However, the loss of raptor foraging habitat remains a significant unmitigable impact under this alternative.

5.2.8 Archaeology/History/Paleontology

The impacts of Alternative 9 are the same as the proposed project, or Alternative 8. No significant impacts would occur to archaeological/historical resources, and potentially significant and mitigable impacts could occur to paleontological resources.

5.2.9 Land Use, General Plan Elements, Zoning

Alternative 9 is the same as Alternative 7, with respect to land use, general plan and zoning issues. This alternative proposes 2.5 million square feet, which is allowed by the existing, certified LCP. The densities of this alternative for each type of land use proposed are in the upper end of allowable limits. Compared to the proposed project's average density of 31,000 square feet per acre, Alternative 9 would have an average density of 19,000 square feet per acre. Building heights allowable under Alternative 9 include three 12-story hotels, three 6-story residential buildings, one 5-story residential structure, five 4-story residential buildings, and a 3-story Rohr professional office complex. Other structures are one to two stories in height. Land use compatibility impacts, identified as significant for the proposed project, are judged to be less than significant for Alternative 9 due to the reduction in densities and building heights that cumulatively make the alternative more compatible with surrounding community uses.

5.2.10 Community Social Factors and Community Tax Structure

A significant increase in housing and resulting population would occur on the project site for Alternative 9 over what currently exists on the site, and a substantial increase in employment opportunities would occur. Both of these are considered beneficial impacts to the City-wide and regional supply of housing and employment opportunities. With respect to community taxes, Alternative 9 would generate additional money for the City Redevelopment Agency, thereby resulting in a positive impact to the City.

5.2.11 Parks, Recreation and Open Space

Alternative 9 allows for 35.9 acres of parks. The parks would be contiguous west of Marina Parkway and would include 26 acres of active parkland and 9.9 acres of passive parkland. As shown on Figure 5.1-I the boundary between active and passive parks would be delineated with a recreational trail and low wall to effectively segregate active use areas from biologically sensitive resources. Similar to Alternative 7, Alternative 9 does not identify all public parking and accessibility opportunities, and thus, at the plan-level of EIR compliance, these issues remain potentially significant. This alternative would not result in any significant impacts to parks or open space areas due to shadows, since public parklands and the central lagoon will not be in shade for significant summer or winter periods. (See discussion of Alternative 7 in Volume II.)

5.2.12 Utility Service

Impacts to utility services, including gas and electric, fire and police, solid waste, sewer, water and schools would be the same for Alternative 9 as previously reported for Alternative

7. Impacts to gas and electric, and police service are not considered to be significant. Potentially significant impacts to the level of sewer service would be modified by review of infrastructure upgrades. This alternative would contribute, incrementally, to regionally-significant impacts to landfill capacity and water resources. Significant impacts to local services are identified for both fire protection and schools and are considered to be significant at the plan-level of analysis. Feasible mitigation measures are available that may be implemented at the project level of environmental compliance.

5.2.13 Transportation/Access

Alternative 9 would have traffic impacts similar to those previously identified for Alternative 5. See Section 3.14 of Volume II for a discussion of Alternative 5.

6.0 RESPONSES TO COMMENTS ON RECIRCULATED DRAFT EIR

Seven (7) letters were received on the April 1991 Recirculated Draft EIR from federal and local agencies and the public. Table 6-1 lists the sources of comments received on the Recirculated Draft EIR and the letter designations referenced for each in this section.

The preparers of the responses to comments are the same project team that prepared the Draft and the Recirculated Draft EIR. Responses have been provided by:

- *City of Chula Vista* - *Ms. Robin Putnam
Ms. Diana Richardson*
- *Keller Environmental Associates, Inc.* - *Ms. Christine Keller*
- *Group Delta Consultants, Inc.* - *Mr. Walt Crampton
Mr. Ford Garner*
- *Pacific Southwest Biological Services* - *Mr. Keith Merkel
Mr. Jim Bahr*
- *JHK and Associates* - *Mr. Dan Marum*

Table 6-1
Comment Letters Received on Midbayfront Recirculated EIR

- EE. Office of Planning and Research, letter from David C. Nunenkamp, Deputy Director, Permit Assistance, dated May 20, 1991 (1 page).*
- FF. U.S. Fish and Wildlife Service, letter from Brooks Harper, Office Supervisor, dated May 23, 1991 (7 pages).*
- GG. Environmental Health Coalition, letter from Laura Hunter, Clean Bay Campaign, dated May 14, 1991 (5 pages).*
- HH. San Diego Chapter Sierra Club, letter from William J. Robens, Conservation Chair, South Bay Group, dated May 19, 1991 (3 pages).*
- II. Sweetwater Union High School District, letter and enclosures Appendices I and J from Thomas Silva, Director of Planning, dated April 24, 1991 (4 pages).*
- JJ. Chula Vista Elementary School District, letter and attachments from Kate Shurson, Director of Planning, dated May 21, 1991 (2 pages).*
- KK. A.D. Hinshaw Associates, letter and attachments from Philip L. Hinshaw, dated May 21, 1991 (11 pages).*
- LL. Excerpt from City of Chula Vista Planning Commission minutes of May 22, 1991 (3 pages).*

MAY-28-'91 MON 16:46 1D:GOVERNOR'S OFFICE TEL NO:916 323 3818 #421 P02

STATE OF CALIFORNIA
GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO, CA 95814

Comment EE

Comment EE - Governor's Office of Planning and Research



May 20, 1991

ROBIN PUTNAM
CHULA VISTA CITY
276 4TH AVB
CHULA VISTA, CA 91910

Subject: PROPOSED LOCAL COASTAL PROGRAM RESUBMITAL #8

Dear ROBIN PUTNAM:

The State Clearinghouse submitted the above named environmental document to selected state agencies for review. The review period is closed and none of the state agencies have comments. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call Tom Loftus at (916) 445-0613 if you have any questions regarding the environmental review process. When contacting the Clearinghouse in this matter, please use the eight-digit State Clearinghouse number so that we may respond promptly.

Sincerely,

A handwritten signature in black ink, appearing to read "Bapt-k".

David C. Hunenkamp
Deputy Director, Permit Assistance

Comment FF



United States Department of the Interior
RECEIVED
FISH AND WILDLIFE SERVICE
FISH AND WILDLIFE ENHANCEMENT
SOUTHERN CALIFORNIA FIELD STATION
Laguna Niguel Office
Federal Building, 24000 Avila Road
Laguna Niguel, California 92656

MAY 24 1991
PLANNING

May 23, 1991

Douglas D. Reid
Environmental Review Coordinator
Planning Department
City of Chula Vista
P.O. Box 1087
Chula Vista, California 92012

Re: Review of City of Chula Vista's Recirculated Draft Environmental Impact
Report for the Proposed Midbayfront Development, Chula Vista, San Diego
County, California

Dear Mr. Reid:

The U.S. Fish and Wildlife Service (Service) has reviewed your April 1991 Recirculated Draft Environmental Impact Report (DEIR), Local Coastal Program Resubmittal No. 8 Amendment (LCP), and Appendix C "Biological Resources" for the proposed development of the Midbayfront Development, Chula Vista, California. The Service in a May 22, 1991 telephone conservation with Robin Putnam of your staff requested a two day time extension to review and comment on the DEIR. The Service requested this time extension because of the necessity to appear in federal court to testify as an expert witness. Ms. Putnam granted this request.

The Service's review of these documents focused on the direct and secondary impacts the proposed development of the project would have on fish and wildlife resources and their associated habitats in Sweetwater Marsh National Wildlife Refuge (Refuge) and San Diego Bay (Bay) both of which lie immediately to the west and are adjacent to the subject property. Protection of biological integrity of the Refuge is paramount to the Service as the Refuge is inhabited by five endangered species, contains over 90 percent of the remaining coastal salt marsh habitat found on the Bay, and is one of only three Federal refuges located in coastal southern California.

The Service previously reviewed the proposed project in a letter of comment dated September 26, 1990, which was submitted to the City of Chula Vista on the initial DEIR dated August 1990. This letter identified a number of significant issues and concerns relative to the potential impacts the Midbayfront Development would have Federal and State listed endangered species and other biological resources within the Refuge and Bay.

Since the submittal of our September 26, 1990, letter, Chula Vista Investors (CVI), the project applicant, and CVI's consultants have been working closely

with the Service to develop significant compensation measures that would offset project impacts and biological concerns raised by the Service. The specific compensation measures jointly arrived at by CVI and the Service are documented in CVI letters dated December 16, 1990; January 15, 1991; March 22, 1991; and May 8, 1991, that have been submitted to the Service. Furthermore, CVI and the Service are currently negotiating a contractual agreement which will formalize CVI commitments to implement the agreed-upon package of compensation measures. Some of the major compensation measures CVI has agreed in principle to implement include:

1. Restoration of 3.5 acres of freshwater marsh and 2.3 acres of coastal salt marsh on highly disturbed habitats that adjoin "F/G" Street Marsh.
2. In addition to the acreage mentioned above, CVI has committed to donating 3.5 acres of land west of "F/G" Street Marsh. Approximately 2 acres of this land which is immediately adjacent to the Bay would be converted to coastal salt marsh habitat which would greatly enhance the tidal prism of the marsh.
3. CVI would construct a 50-foot long single span bridge with a 10-foot vertical clearance across Marina Parkway to facilitate the movement of marsh birds, particularly the endangered light-footed clapper rail (rail).
4. In addition to the bridge discussed above, a minimum of three 48-inch diameter culverts would be placed to substantially increase tidal flushing of "F/G" Street Marsh.
5. Detailed design requirements for project buildings, landscaping, and lighting would be incorporated in order to minimize project impacts on biological resources. A key element of the design requirements was to eliminate potential avian predator perches that could facilitate predation by raptors on the endangered California least tern (tern) and the rail.
6. An additional 100 feet to the 100-foot wide buffer stipulated in Settlement Agreement (Sierra Club v. Marsh) would be provided so that all development and public access would be a minimum of 200 feet from "E" street, Vener, and Sweetwater Marshes. The additional 100-foot buffer lands, that total approximately 8.8 acres, would be planted with coastal sage scrub vegetation. A fence being approximately 3,340 feet in length would be placed in the inland portion of the buffer as a means to control public access to the Refuge. Separate fencing and planting of coastal sage scrub vegetation would be provided at "F/G" Street Marsh.
7. For the life of the Midbayfront Development, CVI would fund a major predator management program to protect terns and rails and other species of high management priority to Service (i.e., shore, marsh, and wading birds). This program would include the funding of two full-time staff personnel for the Refuge, at least two seasonal predator management specialists hired by U.S. Department of Agriculture, Animal Damage Control, and a professional ornithologist who has expertise in handling

Comment FF - United States Fish and Wildlife Service

8. Approximately 15 acres of saltmarsh habitat on "D" Street Fill and 2 acres of freshwater habitat on Gunpowder Point would be created. Both sites are located on lands administered by the Refuge.
9. Specific funding would be provided to a group known as Project Wildlife, which is dedicated to the temporary holding and rehabilitating birds of prey.
10. Water quality control systems would be incorporated and a specific water quality monitoring program would be implemented.

In view of the extensive mitigation measures specified in the April 1991 Recirculated DEIR and the major compensation measures committed to by CVI, it is the position of the Service that the biological issues and concerns raised in our September 26, 1990, letter have been satisfactorily resolved at the conceptual level with one exception. This exception includes the development of band of additional salt marsh habitat that would provide a wildlife movement corridor between "F/G" street Marsh and Sweetwater Marsh.

The construction of a 200-foot wide corridor of salt marsh paralleling the Bay and providing a link between "F/G" Street and "E" Street Marshes was discussed many times between the Service and CVI during the past 7 months. CVI maintained that a salt marsh corridor requested by the Service was not feasible because it would not function hydrologically, the stability of the habitat created would not last without protection of a 1,400-foot breakwater, and the corridor would create a number of critical problems with respect to overall project design, project economics, and marketability. CVI was also concerned that a redesign of the Midbayfront Development plan, to incorporate such a corridor, would disrupt the EIR and permit schedule, result in serious time delay, and significantly increase project costs. CVI's concerns with a salt marsh corridor were summarized in a letter to the Service dated April 12, 1991. CVI believes compensation measures 1, 2, and 3 listed above, combined with a commitment to design the shoreline of the property to prevent public access to the Bay mudflats, provides adequate compensation for waterbirds to gain access to the marsh areas of the Midbayfront. In light of these compensation measures, CVI believes a wetland corridor is not needed.

In January 1991, the City of Chula Vista submitted to the Service, for our review, a draft version of Alternative 9 "Public Comment Alternative," Figure 5.1-I, Volume 1 of the DEIR. One feature of the plan which was extremely attractive to the Service was the redesign of the lagoon so that a freshwater/brackish marsh corridor could be created between "F/G" Street Marsh and "E" Street Marsh (Figure 1). This redesign of the lagoon provides a wetland link between "F/G" and "E" Street Marshes without encountering the problems created by a system dependent upon tidal flushing. We recommend incorporation of this feature, if technically feasible. We believe this corridor is a critical element given the projected increase of traffic and people that would disrupt normal bird migrations between marsh habitats.

FF2 The other major concern expressed by the Service in our September 26, 1990,

- FF1** Although CVI and the USFWS have negotiated several measures that would benefit wetland habitats, this Final EIR only addresses those items which (1) have been included in the project description or (2) are recommended mitigation measures which would be required to reduce impacts to a level of non-significance. The measures identified as items 1-10 in the Service's letter would not modify impact assessments relative to determinations of significance or non-significance. If, however, the applicant desires to have the negotiated measures considered and incorporated into the CEQA document by the lead agency, those measures should be offered as additional or alternative compensatory measures by the applicant.

The comment regarding the USFWS endorsement of a salt marsh corridor between the F/G Street Marsh and the E Street Marsh is noted. It should, however, be noted that the salt marsh corridor is not necessarily the only option by which issues such as a natural barrier between development and sensitive mudflat habitats and enhancement of inter-marsh movement by wetland species may be addressed. Vegetative buffering, distance and visual buffering, and fencing can also mitigate impacts if properly designed, installed, and maintained. In the Recirculated DEIR, concerns over Alteration of Predator/Competitor/Prey Regimes and Endangered Species were identified as significant and not mitigated at the plan level (Recirculated DEIR Vol. II; 3-116). Biological mitigation requirement #1 (Recirculated DEIR Vol. II; 3-110) is the development of a Biological Resource Management Plan (BRMP) for inclusion in the project and subject to environmental review at the project level. Under various sections of the BRMP details of the project's Landscape Design and Management Plan, Human Activities Management Plan, and Predator Management Plan will need to be developed for project-level review.

- FF2** The Service's comments are acknowledged that:
- Alternative 7a is preferable on a conceptual level, with the exception of the bicycle/pedestrian path located west of the passive park area; but the Service believes that the path should be located on the east side of the passive area.
 - The Service wants to review any alternatives being considered for their compensation measures related to biological impacts.
- It is important to recognize that once a detailed development plan is submitted to the City for this site, the Service would have an opportunity to review and comment on that plan.

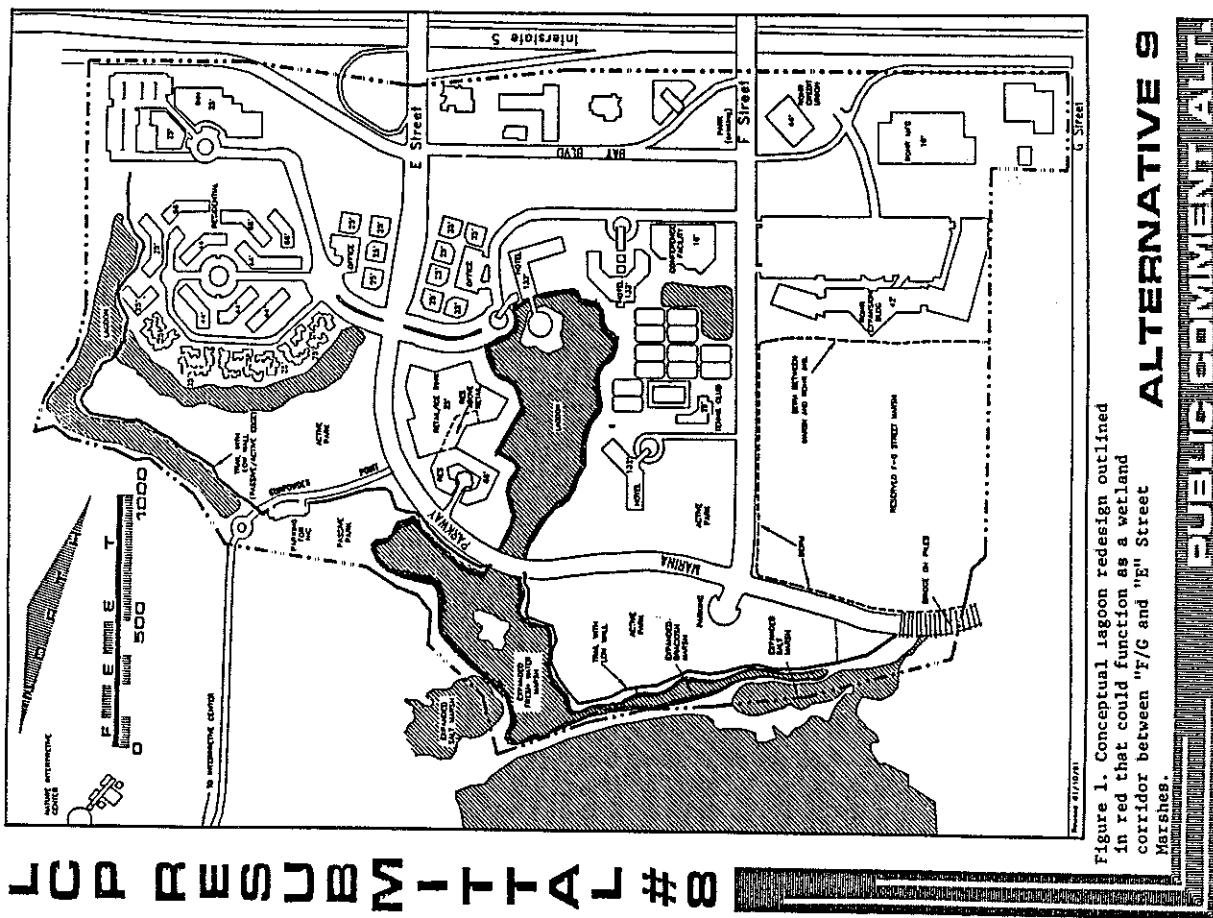


Figure 5.1-I

letter was a reduction of height and density of development within the Midbayfront. In our September 26, 1990, letter we stated:

"On a conceptual level, we prefer a development plan similar to Alternative 7a which has no buildings west of Marina Parkway, has greatly reduced heights for the proposed apartment buildings north of "E" Street and shows 'passive' designation zones for the park/open space adjacent to San Diego Bay and Sweetwater Marsh NWR. One serious drawback with this plan is the bicycle and pedestrian path that is proposed west of the 'passive' park designation zone. The bicycle and pedestrian path should be located east of the 'passive' park zone to protect shore, marsh and wading birds and the Bellding's savannah sparrow from human disturbance."

We note that Alternative 8 (Revised Project) has resulted in some reduction in the height of buildings west of Marina Parkway. In particular, the height of the Luxury Hotel west of Marina Parkway has been reduced approximately in half. Other structures west of the Parkway have been eliminated. However, several alternatives were presented in the DEIR that if proven feasible would reduce the density and height of the buildings adjacent to the Refuge. Conceptually, the Service prefers these alternatives. However, before our agency would fully endorse these plans, the Service would want an opportunity to review these plans in detail and to evaluate what specific compensation measures would be incorporated into these developments to offset biological impacts, particularly those to endangered species. However, even with a reduced level of development, the Service would still recommend many of the compensation measures that have been proposed in the DEIR be incorporated into these alternatives.

Specific Comments

Recirculated Draft Environmental Impact Report - Volume 1..3.0 Responses to Comments_3.3_General Responses Regarding Biological Issues_3.3.8.2 Governing Body for Predator Management Program. Page 3-36

In this section of the document discusses having a governing body make decisions regarding the predator management program. It was also suggested that it may be feasible that the management responsibility for implementing the program be given to a single entity, which is governed by the predator management plan and joint-powers agreement and which is made responsible to a more broad-based, multi-jurisdictional policy-making committee for necessary revisions to these documents. It has been the Service's position since development was proposed at the Midbayfront that predator control must be incorporated as a feature of the project to ensure protection of sensitive species, particularly those species that are listed as endangered by the Service, and/or California Department of Fish and Game (CDFG). The Service's and the Department's biologists have the necessary biological training and share the mandate to manage for these sensitive species. Therefore, decisions concerning the necessary management of predators should be the sole responsibility of our agency and CDFG.

FF3 The intent of the multi-jurisdictional body was to facilitate actions by a single entity that may occur outside of that entity's jurisdiction. We concur that it may be well-advised to assign management responsibility to a single entity such that a responsible party may be designated. We do, however, maintain that no program will work without the support of all surrounding jurisdictions. Further, some agreements, perhaps in the form of a Memorandum of Understanding (MOU), may be required as a part of the management program. We further are concerned that the Service has identified two separate agencies as a suggested sole responsible management entity. If immediate action is required, we are concerned that ambiguous protocol may hinder efforts.

The intent of assigning the responsibility for implementation of the program to a single entity was to avoid problems arising from conflicting policies, or confusion regarding areas of responsibility. Since major issues with the proposed project relate to its effects on the adjacent Sweetwater Marsh National Wildlife Refuge and the U.S. Fish and Wildlife Service has the mandate to manage that area, we recommend that the Service be designated as the responsible entity for the implementation of the Predator Management Program.

However, a multi-jurisdictional policy-making committee, responsible for ensuring cooperation between jurisdictions and making revisions to the MOA and/or biological resources management plan documents, should be formed. The Service would be a member of the multi-jurisdictional policy-making committee.

Mitigation measure number 7 states: "No 'in-water' construction should be allowed during the period of 15 April - 1 September to avoid the potential for elevating turbidity in the nearshore foraging and chick training areas of the California Least Tern. No construction activity, earthmoving, or high intensity activity will occur within 200 feet of any salt marsh, freshwater marsh, or mudflat habitat during the period 15 March to 31 August without prior approval by the U.S. Fish and Wildlife Service and California Department of Fish and Game."

The Service recommends the "in-water" timing restriction reflected above be modified. A timing restriction to ensure no construction conflicts with the tern should be from April 1 to September 15.

The provision of not allowing construction activity 200 feet from wetland habitats from 15 March to 31 August would need to be carefully evaluated on a case-by-case basis. On March 13 and 14, 1991, pile driving operations being conducted by California Department of Transportation (CALTRANS) on the Interstate 5/Highway 54 Project that is adjacent to the Refuge resulted in disturbance of terns nesting on "D" Street Fill. Even though the pile driver was located approximately 2,500 feet away from the nesting birds, start-up of this piece of equipment would result in terns immediately leaving their nests. Based on these observations, the Service requested CALTRANS to immediately cease pile driving operations. CALTRANS complied with our request.

Commencement of work after August 31 may not, in some years, avoid construction conflicts with the tern. Terns generally initiate migration from San Diego Bay by the end of August. However, several times in recent years, they have been observed in San Diego Bay as late as the second week in September. For this reason, the Service recommends construction work involving pile driving be initiated after September 15.

The Service looks forward to continuing close interaction with CVI to work out the details of the compensation measures discussed to date. We also want to formalize an agreement with CVI that stipulates a timeframe and a means of implementing the compensation measures agreed upon.

The Service also wants to work closely with your staff on property owned and/or administered by the City adjacent to the Refuge. We want the opportunity to review and comment on all future DEIR's that discuss specific developments within the MidbayFront. Based upon the information contained within these individual documents, the Service may make additional recommendations to avoid or reduce impacts to fish and wildlife species and their habitats.

FF4 The timing constraints for "in-water" construction have been modified to be consistent with the Service's recommendation of 1 April to 15 September. However, it is of great concern that drainage facilities which require in-water construction be completed as rapidly as possible to ensure that long-term sedimentation, or erosion damage from incomplete work, does not occur. Because of this concern, it is not considered desirable to strictly limit the project construction schedule if that limitation would result in a stoppage of work for an extended period of time.

The proposed lengthened period of restriction reflects extremes of the tern season which would be an atypical situation in San Diego Bay, thus the timing constraint will allow for flexibility. If it can be demonstrated that terns have either arrived later or departed earlier than the specified dates, the lead agency working in conjunction with the USFWS shall have the flexibility to modify the time constraints to allow more time for construction.

The Service has indicated a concern over the recommended 200-foot seasonal set-back from wetlands which is included in the Final EIR as a mitigation measure for issues associated with nesting activities of the light-footed Clapper rail and Belding's Savannah sparrow. The intent of the construction set-back requirement at wetlands is to avoid disturbing the nesting activities of the species listed above. The least tern does not nest within the project area or adjacent wetlands and was not intended to be a focal point of this portion of the recommended timing constraints. Concerns over the nesting activities of the Clapper rail and Belding's Savannah sparrow remain and are believed to be adequately addressed by the 200-foot seasonal buffer.

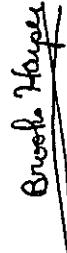
To address the concerns discussed above, mitigation measure 7 in Recirculated DEIR Vol. II, pages 3-112, has been modified as follows:

7. a. No "in-water" construction shall be allowed during the period of 1 April through 15 September to avoid the potential for elevating turbidity in the nearshore foraging and chick training areas of the California least tern. Further, any other activities which are identified by the biological monitor as having this effect should be precluded from occurring during this period. If it can be demonstrated that the least tern has not yet arrived in south San Diego Bay, or has departed earlier than the specified dates, the applicant or agent may petition the City to modify this timing constraint. The City, acting in consultation with the USFWS shall have the ability to modify this period to reflect the presence of terns during the actual year(s) of construction.
 - b. No construction activity, earth moving or high intensity activity will occur within 200 feet of any salt marsh, freshwater marsh, or mudflat habitat during the period between 15 March and 31 August without prior approval by the U.S. Fish and Wildlife Service and California Department of Fish and Game.

Mr. Douglas D. Reid

Coordination on the Midbayfront Development should continue to be conducted
with Martin Kenney of my staff at (714) 643-4270, and Ron Ryno, Acting Refuge
Manager, Sweetwater Marsh National Wildlife Refuge, at (619) 575-1290.

Sincerely,



Brooks Harper
Office Supervisor

cc:
CDFG, La Mesa, CA (Attn: T. Stewart)
Sweetwater Marsh NWR, Imperial Beach, CA (Attn: R. Ryno)
California Coastal Commission, San Diego, CA (Attn: D. Lee)

6

FF5 These comments are acknowledged. The Service would have the opportunity to review and comment on any proposed project within the Midbayfront for which an environmental compliance document is required, and which may have an impact on the resources of the Refuge.

06-04-066 07/12/91

Comment GG



ENVIRONMENTAL HEALTH COALITION

1844 Third Avenue • San Diego, California 92101 • (619) 235-0281

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USD Environmental Law Clinic

May 14, 1991

City of Chula Vista Planning Commission
c/o Robin Putnam
276 Fourth Avenue
Chula Vista, CA 92010

RE: RESPONSES TO THE RECYCLED ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE CHULA VISTA BAYFRONT PROJECT

Dear Robin,

The recirculated EIR is more complete than the earlier one and we are glad to see that more complete information was provided from the developer.

We have three areas of comment:

1. All possible AND feasible mitigations are not listed under Feasible Mitigation Measures.
2. Not all projects under consideration for the bay were considered in the cumulative impacts section.
3. The discussion of pesticides is inaccurate and lacks critical details.

1. EHC REQUESTS ADDITION TO FEASIBLE MITIGATIONS MEASURES OF THE FOLLOWING MEASURES:

While some of these measures would require major changes to the project they are changes that could significantly reduce the negative

*Orbital logo for identification purposes only

impacts to the environment caused by the current project plan. These changes also promote the concept of sustainable yield uses of the area.

Hydrology/Water quality

GG1 Include a Water reclamation Plant in the Project

An alternative water source for the lagoons which should be explored is that of reclaimed water. A water reclamation plant could be incorporated in to the project plan to lessen impacts to water demand and the water reclaimed from this plant may be used of the lagoons.

GG2 Water Conservation

To offset the increase in water usage from the project we would recommend a policy such as is used in Morro Bay, CA. As a prerequisite to constructing any new home, a builder must first save more water than the new home will use. Builders have the option of paying to replace a specified length of the city's leaky water mains or retrofitting existing homes with water saving devices. A requirement like this one would insure, up front, that the new project would 'pay its own way' water-wise.

GG3 Toxic contaminant discharges

There still is no provision for toxic pollution prevention and collection from stormwater discharges other than oil. There is still inadequate assurance that toxics will not be leaked into the marshes and bay. Containment traps, filters, and other mechanism SPECIFICALLY DESIGNED for toxics (other than oil) should be included. The first flush of a rain should be of particular concern. All parking lots, yards, and streets should be equipped with miniature catchment basins or some other alternative to catch/cleanse the first flush of a rain.

The sentence stricken from page 3.81 which reads "Since the potential for contaminant discharges cannot be estimated at this time, this impact is considered to be significant and unmitigable" should be reinstated because the long term and cumulative impacts of contaminant discharge can be expected to have negative impacts. It should be remembered that even allowable low levels of contaminants multiplied by many projects adds up to a significant cause of pollution to the Bay. Currently the bay is a listed 'water quality impaired segment'. Additional pollutant loading will make the current situation worse.

GG4 Household and Industrial Toxics Use Reduction

An aggressive plan of household toxic use reduction and industrial toxics use elimination be pursued for this project. The project plan should also include a permanent collection center for household hazardous waste.

Comment GG - Environmental Health Coalition

GG1 This suggestion is acknowledged. The Recirculated DEIR states on page 3-165 that one of the water conservation measures which could be implemented at the project-level design is the installation of reclaimed water lines. Incorporation of a water reclamation plant into the plan as suggested was not required in the Recirculated DEIR since other sources of reclaimed water are expected to be available. Over the next 15 to 30 years, water reclamation facilities are planned to be developed throughout the San Diego Metropolitan Area, including plants in South Bay and Otay Valley as part of the San Diego Clean Water Program. It is reasonable to assume that the Midbayfront development may have access to reclaimed water for appropriate nonpotable uses such as park irrigation, and residential and commercial irrigation uses.

GG2 This suggestion is acknowledged. The future project must comply with Sweetwater Authority's requirements, and with any City of Chula Vista requirements for water conservation.

GG3 It is acknowledged that the proposed oil/grease/sediment traps are designed to remove suspended materials and not expected to remove soluble compounds. It is also acknowledged that the "first-flush" of a rain is of particular concern.

Contaminant discharge from the proposed project was carefully analyzed by the consultant team. Concerns over the proximate location of the site to the sensitive wetlands and San Diego Bay were of primary concern. Because of these issues, an extensive drainage system including large volume grease and silt traps was recommended for all drains along with an ongoing maintenance program (Recirculated DEIR Vol. II; pg. 3-11, #2,3). In addition, a detailed Water Quality/Runoff/Drainage Management Plan is required at the project-level review.

With the exception of water soluble chemicals such as nutrient salts and silt, grease traps are typically effective in the removal of most contaminants. Most heavy metals, petroleum products, organic solvents and other common urban pollutants are bound by the oils and negatively charged silt particles which are fractioned off by such traps.

Further, through the incorporation of the other measures to control contaminants as identified in the Recirculated DEIR (Vol. II; Pg. 3-81 and 82), this issue of contaminant discharge is considered to be adequately mitigated at a plan level.

Regarding remaining comments on toxic pollution prevention and use of miniature catchment basins, it is noted that the San Diego Water Quality Control Board (with encouragement from the EPA) has recently adopted Order 90-42, which addresses "Waste Discharge Requirements for Storm Water and Urban Runoff." As noted in the Draft EIR in Section 3.2, Hydrology/Water Quality, Mitigation:

GG5 Enhanced Wetlands Areas It may be that the concept of sterile, clay-lined lagoons, in this time of drought and loss of wetland habitats, are not appropriate. They should be replaced with natural open space parks or productive wetlands which would serve be an environmental enhancement such as is proposed in alternative 9. For alternative water sources please see above.

GG6 Integrated Pest Management To mitigate the negative effects from pesticide pollution to the area, an Integrated Pest Management program based on non-toxic chemicals and beneficial insects should be used by the project proponents and included in the mitigations.

GG7 Construction Dewatering Should the appeal of NPDES 90-31 be successful, how the construction dewatering will be discharged should be addressed.

GG8 Air quality Instead of a co-generation plant, which promotes non-renewable energy production, an active solar plant should be developed. Solar energy could reduce the energy requirements of the project and greatly reduce the resulting air pollution from the project.

GG9 Solar Energy The project should also be designed to take advantage of passive solar energy opportunities.

GG10 Promote mass transit, cleaner fuels, walk, and bike trails

To mitigate the significant negative environmental effects of additional cars and air pollution on the bay, the project could be designed without autos and with an emphasis on mass transit, bikes, and pedestrian means of travel. Promotion of mass transit, biking and hiking paths, replacing the street Marina Parkway with a bike/hike trail are all options that should be considered as possible mitigation. These would do much to reduce air pollution and the negative environmental effects of this project.

To promote cleaner burning fuels in cars, the parking garages should have reserved, close-up parking for those cars which burn hydrogen/natural gas/alternative fuels. Any vehicles used in project maintenance should be cleaner fuel burning as well.

GG11 Solid Waste

A state-of-the-art recycling, composting, and reuse facility should be incorporated into the project plan to mitigate the effects of increased solid waste. Composting of organic and yard and landscaping waste could significantly reduce trash to landfill.

GG12 Ban on single use containers

To reduce litter, no plastic or styrofoam single use containers should be sold within the

- Traps for contaminant control must be approved by the City Engineering Department before they may be installed. The City Engineering Department must verify that all EPA, and any Regional Water Quality Control Board Standards and all other applicable regulations are met. If they are not, grading may not proceed until the standard is met. Proof of effectiveness must be shown before approval can occur.

The requirements of the interested regulatory agencies will determine the location, size and design of the storm water pollution control devices.

GG4 These suggestions are acknowledged. Project-specific measures are relevant at the project level, and will be reviewed at that time. The applicant will have to comply with all local, state and federal regulations regarding hazardous wastes.

GG5 This comment is acknowledged. See response to FF1.

GG6 Page 3-82 of the Recirculated DEIR requires a project-level chemical management plan. The actual plan and its components will be developed at the project level of environmental review.

GG7 The situation suggested is considered speculative, and thus, is not addressed in the EIR.

GG8 This comment is acknowledged.

GG9 This comment is acknowledged.

GG10 This comment is acknowledged.

GG11 This comment is acknowledged.

GG12 This comment is acknowledged.

project site. This would significantly reduce solid waste and reduce the hazard that these materials pose to marine life.

2. NOT ALL PROJECTS UNDER CONSIDERATION FOR DEVELOPMENT ARE CONSIDERED IN THE SECTION ON CUMULATIVE EFFECTS

Missing from the list of proposed or planned developments and their cumulative effects on the bay are:

GG13 National City Marina- proposed in concept for Sweetwater channel adjacent to Pepper Park

Anchorage A-7 Crown Cove

Anchorage A-8 Sweetwater

Fleet Landing Dock/Float Facility

Embarcadero Floating Dock

G Street Floating Dock

(Above were taken from a San Diego Unified Port District Agenda Sheet. Item #20, August 1, 1990)

Other:

Cumulative effects of increased PAH pollution in south bay sediments

GG14 Effects of Copper spill at the 24th Street Marine Terminal and probable cleanup activities surrounding this hazardous waste site

Effects of elevated levels of metals and PCBs near the Rohr outfalls and possible cleanup of bay sediments near Rohr outfalls

Effects of contaminated sediments near the shipyards

Effects of major inland developments on the demands on the bay.

3. REPRESENTATION OF PESTICIDES IN THE EIR

GG15 We have a major concern with how chemical pesticides are characterized in the EIR. Page 3-82 of the EIR states "The fertilizers and pesticides used today are generally safer in terms of their consequences to untargeted species." is unsubstantiated. If the chemicals under consideration are organophosphates or carbonates as opposed to the older organochlorines, this statement may be true. HOWEVER, we will not know until the required environmental fate studies are completed. Further, what we are discovering with the environmental fate data available on the organophosphates, is that many of these newer substances are acutely toxic to wildlife, especially bees, birds, and fish. There are also the synergistic effects of these chemicals mixing in the water ways which

GG13 The text below describes the proposed or planned developments from the commentor's list along with an explanation regarding why those projects were not included in the cumulative impact analysis of the Recirculated DEIR.

1. National City Marina - This project was included in the cumulative projects list as Barkett Marina.

2. Anchorage A-7 Crown Cove - This is a State of California Parks and Recreation Department project that was not included in the cumulative impact analysis because it was not considered reasonably expected. The project would entail construction of a marina and mooring project east of Silver Strand State Park. It is currently on hold because there are no State funds available for the project.

3. Anchorage A-8 Sweetwater - This anchorage has already been established, but it was not a construction project. It provides boats that were previously scattered throughout South San Diego Bay with a designated mooring area.

4. Fleet Landing Dock/Float Facility - This project was not included in the cumulative impact analysis for the LCP Resubmittal project because it was considered too far north. The proposal is located between the G Street Mole and the Navy pier. The purpose of this project is to provide slips (less than 12) and floats for vessels coming into San Diego Bay in association with the America's Cup.

5. Embarcadero Floating Dock - We believe that this refers to the existing floating dock that was constructed for the Maritime Museum. This project was not considered in the cumulative impact analysis because it already exists and would be considered part of the baseline environmental conditions.

6. G Street Floating Dock - We believe that this refers to a project entailing 25 commercial fishing slips and floats that is already under construction. This project was not considered in the cumulative impact analysis in the Recirculated DEIR because it is located to far north of the study area.

GG14 The EIR analyzed cumulative impacts from all known past, present and reasonably foreseeable projects. The effects that are stated in the comments are not effects from projects, and were not included in the analysis. However, the comment is acknowledged that there are numerous contaminants in the San Diego Bay, and that there are cumulative water/sediment quality impacts from all contaminated discharges to the Bay. These effects do not change the conclusion of the analysis which was that cumulative impacts would occur with project development, and that water quality impacts can be mitigated (at a plan level) to a level of less than significant. Project-level impacts and mitigation measures would be analyzed when a project is defined and submitted to the City for environmental review.

GG15 The statement "fertilizers and pesticides are generally safer in terms of their consequences to un-targeted species" was intended to be general in nature. Certainly, there are chemicals available which do not fit in this category. However, many of the chemicals on the market today have been specifically designed to be short-lived in the environment by either being photo-degenerative or biodegradable. The use of these chemicals was recommended in the Recirculated DEIR (Vol. II; pg 3-112, #9).

can make them very toxic in combination with each other and with water. Any discussion of use of chemical pesticides relied on in the EIR should name the exact products to be used. We can then examine the data gaps in the fate studies to see if these chemicals should be used.

GG16 We would caution the project proponents that it is illegal to say that any chemical is EPA 'approved'. (page 3-82 , letter d.)

"Development and implementation of a project-level landscape chemical management which would require d. use of short-lived EPA approved chemicals for use near wetland areas" is an illegal statement. Please see the finding in the attachment to this letter. The 1986 General Office of Accounting report to the Congress states "...it is unlawful for pesticide labels and distributors' promotional material to state that pesticides are EPA-approved, because the statement implies that EPA recommends or endorses the product."

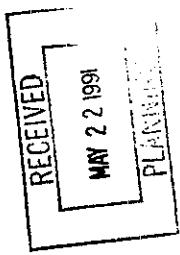
The EIR could be amended to say that the pesticides used should be EPA registered but that this does not imply any assurance of safety for organisms or the environment. To demonstrate how much we don't know about these pesticides and their effects, a reading of any of registration guides for a pesticide will illuminate the data gaps for an EPA registered pesticide.

Thank you for this opportunity to comment on this EIR.

Sincepily,


Laura Hunter, Coordinator
Clean Bay Campaign

Comment HH



Sierra Club
San Diego Chapter
South Bay Group

May 19, 1991
254 Camino Elevado
Bonita, CA 91902

City of Chula Vista Planning Commission
c/o Doug Reid
Environmental Review Coordinator
276 Fourth Avenue
Chula Vista, CA 91910
Ref: Bayfront Recirculated DEIR

Dear Mr. Reid:

HH1 I request that the review period for public comments on the subject document be extended for 30 days for the following reasons:

1. The Recirculated DEIR contains much new information and two new plans.
2. A new category was used for the assessment of environmental impacts. This new category is called "Significant and Not Mitigated at the Plan Level of CEQA Compliance."

The new information and new proposals require more time to review and become familiar with. The new category changes the conclusions which might derived from the DEIR. The implications need time to consider and discuss. At first glance it seems that almost all environmental decisions become project rather than plan decisions. I would like the time to meet with the Redevelopment Agency staff and the environmental consultants to discuss these implications and to be enlightened on their thinking.

Should the review period not be extended, then based on the material so far reviewed, I offer the following comments.

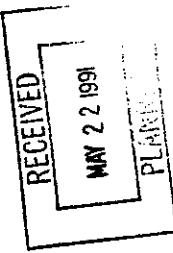
HH2 GENERAL. The term "not mitigated at plan level" implies that mitigation is possible at another level. This may or may not be the case. To provide the decision makers with the most accurate working impression, the category should be expanded—or a new category included—such as:

"Not mitigated at plan level—mitigation may or may not be possible."

This comment is more accurate and descriptive and should be included in the mitigation table and throughout the DEIR where applicable.

HH3 GEOLOGY. Seismic studies should be completed prior to the project level to determine the adequacy of the soils for high-rise buildings, etc. They are a plan level consideration. If mitigation is not possible it should be known now. The text should be revised to so reflect.

Comment HH



Sierra Club
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May 19, 1991
254 Camino Elevado
Bonita, CA 91902

City of Chula Vista Planning Commission
c/o Doug Reid
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276 Fourth Avenue
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HH2 GENERAL. The term "not mitigated at plan level" implies that mitigation is possible at another level. This may or may not be the case. To provide decision makers with the most accurate working impression, the category should be expanded — or a new category included — such as:

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Comment HH - San Diego Chapter Sierra Club

HH1 The public review period which included the state-mandated time element of 45 days was considered adequate for review of the Recirculated DEIR, especially since reviewers previously had a review period of 45 days for the DEIR.

HH2 As the comment has suggested, the description of this category (page 1-3 of Recirculated DEIR) states, "These impacts may or may not be mitigated at later stages of planning and environmental compliance. In most instances, additional baseline studies or project details are needed prior to determining whether mitigation would be feasible or not."

HH3 It is acknowledged that seismic risk is a potentially significant issue. California, including the City of Chula Vista, is an area of high seismic risk. As noted in Section 3.2, Geology/Soils/Groundwater, Seismic Hazards:

Seismic hazards are potentially significant, yet, ~~However~~, standard required design criteria and conventional engineering techniques can be implemented to reduce the risk. ~~The Some~~ risk would always remain due to the uncertainty of future seismic events.

It is recognized that seismic risk exists. It is also recognized that the risk can be reduced by appropriate engineering design. The site-specific geotechnical investigations required in the mitigation portion of Section 3.1 provide the information needed for appropriate engineering design. Whether or not mitigation is possible is, therefore, not an issue. Mitigation is possible, but requires additional information to devise. Acquiring this information via the required geotechnical investigations (including soils and seismic study) is more appropriately performed at the project level.

HH4 HYDROLOGY. With the quality of the environmental values at risk, the hydrology mitigations must be assured before they are put into place. The DEIR recommends a three year monitoring system that could proceed concurrently with the project. A three year monitoring period for a failed system and subsequent degraded marshes is not acceptable. The mitigation must be accomplished, the studies and evaluations completed, before the project level.

On p.3-2) it is stated that the adequacy of quantity and quality of groundwater for the lagoon must "be addressed." It must more than be addressed, it must be assured, and it must be a part of the plan.

HH5 BIOLOGY. Eight different environment management programs are included in the DEIR. It is well recognized that long-term mitigation is difficult to implement and difficult to enforce. The failure of any one of these programs, or a part of any one of these programs, could have serious consequences on the environmental health of the project and the surrounding habitats. The difficulty of maintaining compliance with the programs, and the difficulties and complexities of enforcing these programs should be addressed. The probability of non-compliance and their biological impacts should be spelled out. This should be clearly laid out in the DEIR so that the decision makers have the information to compare the various alternatives.

Post-project monitoring is again mentioned (on p. 3-78) and is again an unacceptable mitigation. Impacts may not be identified until too late for correction. For this reason the impacts (Increased Freshwater Input) should be judged non-mitigable.

HH6 The DEIR states that incorporation of certain measures for contaminant discharge "could provide adequate assurance at a plan level that water quality impacts will be mitigated to a level of less than significant." It also clearly, could not provide that assurance. Therefore the judgement should be changed from mitigable to unmitigable (or mitigation-ability unknown).

HH7 The discussion on human and pet presence is similar. Many mitigating plans are put forth, and the conclusion is that significant impacts "could" be mitigated. Therefore you list them as mitigable. I again disagree. See the above comment for a more accurate way to proceed.

HH8 The same conclusion is drawn on p. 3-97 for Predator/Prey Regimes. The possibility for mitigation exists, as does the good possibility that mitigation will not occur. The conclusions need to be more accurately stated.

HH9 ENERGY. Even though the laws of California may not require an energy plan, we clearly have a long-term problem with energy development and use. An energy conservation plan should be developed at the project level.

HH10 TRAFFIC. The new discussion is much improved over the original EIR discussion. Nonetheless, I have a few concerns. The segment of "E" Street from Bay to Woodlawn needs to be addressed, not only the intersections. I believe the problems on "E" Street, and at certain intersections, though significantly impacted by traffic may be understated. The distribution of only 7.5% of project trips to "E" while 10% of project trips is distributed to other E-W streets seems unrealistic.

HH11 The assumptions for traffic distribution discussed in the DEIR are questionable. Whether or not drivers are willing to go 1-2 miles south, depends on their destination. If they intend on going south, they will divert. If they intent on going north—they probably will not.

HH4 On page 3-18, a minimum three-year timeframe for monitoring the effectiveness of the proposed oil and sediment traps and desilting basin is required. The effectiveness of these facilities cannot be evaluated until they are installed and the proposed project is constructed.

Regarding addressal of groundwater quantity and quality, the measure in question refers to the project-level design. When the detailed project plan is submitted to the City, the City would require a comprehensive plan for use of groundwater, including environmental considerations of quantity and quality.

HH5 We would concur that long-term mitigation is difficult to implement and enforce. For this reason, the California Assembly passed AB 3180 to require mitigation program monitoring to ensure that mitigation measures required in environmental documents are implemented and their success is monitored. The lead agency is required to prepare and implement a monitoring program which would ensure compliance with the required mitigation measures.

The negative impacts on the environment from non-compliance with mitigation requirements is well recognized. However, such requirements are legally binding.

HH6 The word "could" resulted from the writing style of the preparer of the response, and has been changed to the word "do." The measures discussed are considered to reduce the stated impacts to a level below significance at the plan level.

HH7 See response to HH5.

HH8 See response to HH5.

HH9 This suggestion is acknowledged.

HH10 The section of E Street from Bay Boulevard to Woodlawn Avenue is recognized as a critical segment in the City of Chula Vista Circulation Element. The classification of this roadway as four-lane major with special design features will enhance its capacity and allow it to operate at a higher performance level. The special design treatments include coordinated signal timing, provision of an exclusive right-turn only lane for westbound E Street traffic to access the northbound on-ramp to Interstate 5, the provision of double left-turn lanes for eastbound traffic on E Street to access the northbound on-ramps and the incorporation of the electronic vehicle tagging device at the trolley signals located adjacent to the northbound freeway ramp intersection at E Street. The City of Chula Vista General Plan Circulation Element travel forecast identifies this segment as a high volume location with an average daily traffic volume forecast of 33,000 vehicles per day. This traffic volume projection was developed using the adopted Local Coastal Program for the Midbayfront area along with other general plan land uses and anticipated projects for within the central portion of Chula Vista. The volume forecasted under the LCP Resubmittal is 1,500 vehicles per day greater than the forecasted general plan volume.

The conclusions reached in the Recirculated Draft EIR indicate that the signalized intersections along this segment of E Street between Bay Boulevard and Woodlawn Avenue will operate at acceptable levels of service under build-out conditions with special geometric treatments as recommended in the mitigation chapter of the Recirculated Draft EIR. However, further analysis of this development at the project level may modify the mitigation measures required in the Recirculated Draft EIR or may identify additional mitigation beyond what is currently required to address peak hour traffic conditions at these locations.

It should be noted that Figure 5.1 of the Recirculated Draft EIR indicates that 75% rather than 7.5% of the project-related trips were distributed to E Street at the interchange of E Street with Interstate 5 immediately adjacent to the project. This distribution of project-generated traffic significantly contributes to problems regarding the future operations of this interchange which have been specifically addressed in the traffic impact mitigation section of the Recirculated Draft EIR.

HH11 The trips that were diverted from the intersection of Bay Boulevard at E Street/Marina Parkway reflect the amount of anticipated diversion that will occur due to peak hour congestion at this intersection. As congestion at this location begins to build during the p.m. peak hour, it is anticipated that traffic that has a destination to the south on Interstate 5 will elect to utilize the interchange at H Street or J Street via Bay Boulevard, rather than leaving the project site and experiencing some amount of delay at the referenced intersection. The traffic analysis conducted for the Recirculated Draft EIR indicated that a time savings would be realized for the vehicles which had a destination to the south of the project site via Bay Boulevard and Interstate 5. The traffic analysis did not re-distribute any traffic from this intersection that had a destination to the north of the project site on Interstate 5. All northbound traffic was routed through the interchange of E Street/Interstate 5 and thus, the mitigation measures detailed in the Recirculated Draft EIR are reflective of the impacts caused by this project-related traffic.

The San Diego Trolley runs parallel to Interstate 5 along the east side of the freeway through Chula Vista with stations located near E Street, H Street, and Palomar Street. The capacity of streets crossing the San Diego Trolley tracks and nearby intersections is reduced due to the stoppages in traffic as the trolley passes. This reduction in capacity is due to the impact of gate down time. The available supply of capacity during peak hours is reduced by the number of trolley crossings per hour. At the present time, approximately eight trolleys (four per hour in each direction) cross these arterials in the a.m. and p.m. peak hours. The accumulation of gate down time during either the a.m. or p.m. peak hours equals approximately seven minutes per hour. During this down time period, all traffic operations along the east-west arterials in the study area are restricted, thus reducing available capacity. Over the course of a typical peak hour, gate down time operations represent a reduction in available capacity of approximately nine (9) percent. This nine (9) percent reduction includes the positive impacts of the new electronic trolley vehicle tagging devices which reduce gate down time at all at-grade crossings in the City of Chula Vista. However, in the near future (one to three years), MTDB anticipates adding trolley

vehicles on the south line through Chula Vista. This increase in trolley frequency will negatively impact available capacity and result in an overall reduction in capacity.

As described in a letter of correspondence from Mr. Harold Rosenberg, City Traffic Engineer, dated November 16, 1990 to Urban Systems Associates, Inc., MIDB has informed the City of Chula Vista that they intend to increase the frequency of trains to eight per hour for each direction. Thus, in the future there would be 16 periods when the gates would be down and stopping traffic on E, F, H and J Streets. In other words, approximately one train would be crossing these east/west arterials every three minutes, restricting traffic for approximately 30 seconds per trolley crossing. This delay figure indicates that trolley operations will impact these arterials by reducing the amount of available capacity as calculated below:

$$\begin{aligned} & \text{16 Trolley Crossings} \times 30 \text{ Seconds/Crossing} = 480 \text{ Seconds of Lost Capacity} \\ & \frac{\text{Total Seconds of Lost Capacity per Hour (480 seconds)}}{\text{Total Available Seconds of Capacity per Hour (3600 seconds)}} \\ & = 13.3 \text{ Percent Reduction of Available Capacity} \end{aligned}$$

However, with the trolley gate down, the traffic signals at the E Street/Interstate 5 ramp intersections operate with flashing red signals. After stopping, traffic can legally move through the intersection if the vehicle's path is clear. For example, the eastbound to northbound left turn movement at the I-5 northbound on-ramp can be made on the flashing red signal. Also, the northbound to westbound left turn from the northbound off-ramp can also be made after stopping. Therefore, the effect of the trolley gate operation is a reduction of less than 13.3 percent of intersection capacity. However, it is recommended that this minimal amount of extra capacity not be considered when reviewing trolley impacts.

In addition, the "saturation flow rate," the parameter which assumes the capacity for the intersection lanes in the peak hour level of service calculation, has been assumed at a "Planning Level" of 1,500 vehicles per lane per hour of green signal time (VPLPHG) for turning movements and 1,700 VPLPHG for through movements. Saturation flow rate calibration studies at the interchange, ramp intersections have determined that 1,900 VPLPHG reflects current traffic conditions at the interchange. When comparing the observed average saturation flow rate value of 1,900 VPLPHG to the "Planning Level" lane group capacities of 1,500 VPLPHG and 1,700 VPLPHG it is apparent that reducing the value of 1,900 VPLPHG by 13.3 percent (calculated amount of capacity reduction per hour) results in an adjusted saturation flow rate of approximately 1,650 VPLPHG. Thus, it is concluded that the increase in trolley frequency in the future is almost fully accounted for in the "Planning Level" lane group capacity average of 1,600 VPLPHG for turning movements and through lanes recommended by the City of Chula Vista and utilized in the traffic analysis.

Because of the start and stop time, the 16 transit line stoppages of traffic will amount to more capacity loss than the simple percentage shown in the DEIR indicated. It will more than compensate for the minor advantages stated in the next paragraph, and should be also discussed (p. 3-17).

HH12 PARKING. Even though there is a parking deficit of 907 spaces by one method of calculation, the conclusion is drawn that the amount of parking is considered adequate and without impact (p. 4-19). Even though the park area is called a "community park" it will be clearly used as a bayfront park. It is unrealistic to use city community park standards for this park. The amount of parking is certainly not adequate and it should be so stated. The impact should be considered significant and mitigable.

Thank you for the opportunity to comment on the DEIR. Please consider my request for an extension of time so that a more comprehensive analysis can be made.

Sincerely,

William J. Robens
William J. Robens

Conservation Chair
South Bay Group
San Diego Chapter
Sierra Club

To further clarify this issue, JHK was directed by the City of Chula Vista to analyze the intersection at the interchange of Interstate 5 at E Street using the "Operation Analysis" method described in the 1985 Highway Capacity Manual (HCM). This method enabled JHK to more accurately predict existing and future levels of service based on average delay per vehicle in seconds. The HCM methodology allows delays, such as those anticipated from trolley gate down time, to be factored into the analysis. The results of this "Operation Analysis" indicated that the HCM method predicted similar Levels of Service as compared to the ICU method calculations. Thus, for the purposes of this plan-level traffic analysis, it was concluded that the ICU method predicted acceptable values for estimating future impacts and determining required mitigation measures.

HH12 The discussion of parking adequacy on pages 3-149 to 3-150 includes the dichotomy of two different standards used. As stated on page 3-150, "The City of Chula Vista must decide the required amount of parking for this project. At this time, the amount of parking provided in the public parks remains a potentially significant issue requiring resolution at the project level."

Comment II

Sweetwater Union High School District

ADMINISTRATION CENTER
1130 FIFTH AVENUE
CHULA VISTA, CALIFORNIA 92011
(619) 691-6553

PLANNING DEPARTMENT

April 11 24, 1991

Mr. Kris Salamone
City of Chula Vista
Redevelopment Agency
276 Fourth Avenue
Chula Vista, CA 91911

Dear Mr. Salamone:

Re: Recirculated D.E.I.R. Midbayfront LCP No. 8 Amendment

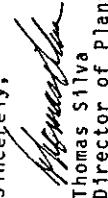
I appreciate the opportunity to respond and comment on the Recirculated Draft Environmental Impact Report prepared for the Midbayfront proposal. I was pleased to see that the district's previous comments were incorporated into the report. If the project's impacts to secondary schools are to be fully mitigated, then the measures described in Appendix 1 items 1 and J (the district's response to the original report) needs to be implemented.

III The district is understanding of the agencies desire to see this project act as a catalyst for an enhanced tourist/commercial base in the city. To that end, the city may not wish to site a senior high school within the project area. If that is the case, then existing offsite facilities will require upgrading if they are to accommodate new students. The applicant has been made aware of this alternative solution and has agreed to its concept.

If the city concurs with this approach, then specific rights-of-way adjacent to an existing school will have to be vacated so that additional classrooms may be constructed. The costs associated with the vacation and subsequent acquisition should be born by the developer not the district. Land acquisition costs are not a component of the district's Weill Roos Community Facilities District No. 5. Enclosed please find the November 6, 1990, letter to the planning department which outlines this alternative approach to mitigate the Midbayfront's anticipated impacts.

Please feel free to call me if you have any concerns regarding this issue.

Sincerely,


Thomas Silva
Director of Planning

TS/sf
cc: Robert Leiter

Comment II - Sweetwater Union High School District

- III The comments are acknowledged. The Recirculated DEIR states on pages 3-165 to 3-166 that "The inclusion of the project to the CFDs would also serve to provide a portion of the required mitigation for project-related impacts." The statement on page 3-166 regarding financing for new facilities via a CFD has been revised to include "and/or alternative financing methods including formation of a new CFD."

89-04-006 07/12/91

Comment II - Appendix I

Sweetwater Union High School District

ADMINISTRATION CENTER
1320 FIFTH AVENUE
CITY OF CHULIA VISTA
276 FOURTH AVENUE
CHULIA VISTA, CA 92115
(619) 491-5533

PLANNING DEPARTMENT

November 6, 1990

Ms. Mary Anne Miller
Planning Department
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 92115

Dear Ms. Miller:

Re: Proposed Chula Vista Midbayfront Plan
Applicant: William J. Barkett, Merian

On October 18, 1990, Mr. William Barkett met with Mr. Andrew Campbell and me to discuss the District's August 23, 1990, letter to your department. As you may recall, that correspondence commented on the Midbayfront Draft Environmental Impact Report and delineated impacts to the District which were not identified in the document.

The result of the October meeting can be summarized as follows:

- Mr. Barkett agreed to the creation of a Mello-Roo Community Facilities District to address all impacts the proposed project has on secondary schools.
- The District agreed to accept Mello-Roo special tax revenue in lieu of developer impact fees.

- Mr. Barkett agreed to mitigate the need for a school site (as identified in Mr. Campbell's May 31, 1990, letter to the City) by securing the necessary land and expanding an existing school facility east of Interstate 5.

Mary Anne, the required land acquisition and expansion of an existing district facility to accommodate this project's students is a critical issue to the District. The project is located in the Chula Vista Junior and Chula Vista High Schools attendance boundaries; therefore, the enhancement of one or both facilities is appropriate. Obviously, City support will be needed. After the District's identification of an appropriate strategy for facility expansion, existing land will have to be vacated, relocation benefits provided, and the property rezoned to accommodate a school use. I'm certain environmental analysis is also required. The costs for these activities should be borne by the developer because they relate directly to the project.

Ms. Mary Anne Miller
November 5, 1990
Page 2

I am requesting that the City not approve the project unless the first and third issues regarding the creation of a community facilities district and land acquisition are conditions of approval. Also, to insure that the funding mechanism is in place, the community facilities district should be established prior to the approval of the project's final map. I have enclosed a copy of an October 26, 1990, letter I sent to Mr. Barkett for your reference.

If you have any comments or questions regarding this issue, please do not hesitate to call me at 691-5553.

Cordially,

Thomas Silve
Thomas Silve

Director of Planning

TS/sf
cc: Kate Shurson
William Barkett

Comment II - Appendix J

Sweetwater Union High School District

ADMINISTRATION CENTER
1130 FIFTH AVENUE
CHULA VISTA, CALIFORNIA 92011
(619) 891-5353

PLANNING DEPARTMENT

October 26, 1990

Mr. William J. Barkett
President, Merjan
864 Prospect Street
La Jolla, CA 92037

Dear Mr. Barkett:

This letter is sent as a follow up to our recent meeting regarding your Middayfront Project proposal and our response to the Draft Environmental Impact Report. During this meeting you mentioned that your company proposed to the City an alternative land use plan which contains 1400 dwelling units, 1800 hotel rooms, approximately 640,000 square feet of office space, and 150,000 square feet of commercial retail space. Given these numbers, the impact to schools is as follows:

| LAND USE | ESTIMATED YIELD | REQUIRED FACILITIES |
|--------------------|-----------------|---------------------|
| Resident | 406 students | 13.5 classrooms |
| *Commercial/Office | 574 students | 19.0 classrooms |

*Source: 1990 SourcePoint

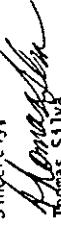
To mitigate the anticipated impact, you had agreed to the formation of a Mello-Roos Community Facilities District, and the district had agreed not to levy school developer fees upon the formation of the Mello-Roos district. A significant unresolved issue is the location of where to house these additional students.

As you know, we had originally requested that the City designate a school site within the project. We understand the difficulty you will have in providing enough area while still keeping the project economically feasible. Therefore, to mitigate the housing issue we would need a cooperative effort from the City, Merjan, and the district in the procurement of additional land to expand an existing facility east of Interstate 5. It is important that you understand that the district cannot sign-off on your project until the Mello-Roos Community Facilities District is in place and the additional land issue is resolved.

I have been informed by the City that although your company is willing to participate in a Mello-Roos district, Rohr Enterprises has strongly objected to any such participation. My question to you is, do you have authority to speak for Rohr?

I look forward to working with you and your company for the earliest resolution of these issues.

Sincerely,


Thomas Silve
Director of Planning



Comment II

CHULA VISTA ELEMENTARY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619 425-9600
EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

BOARD OF EDUCATION

JOSEPH CUMMINGS, Ph.D.
LAUREN CUNNINGHAM
SHARON GILES
PATRICK JUDD
GREG R. SANDOVAL

SUPERINTENDENT
JOHN F. VUGAN, Ph.D.

Ms. Robin Putnam
Community Development Dept.
City of Chula Vista
276 Fourth Avenue
Chula Vista, CA 91910

RE: Midbayfront LCP Resubmittal No. 8 Amendment

Dear Ms. Putnam:

thank you for the opportunity to review and comment on the recirculated Draft EIR for the Midbayfront project.

JJ1 I need to correct an inaccuracy in the Mitigation section of the DEIR, page 3-165. The Chula Vista Elementary School District has an annexable Community Facilities District (CFD), No. 5, not No. 4 as stated in the report. In addition, given the magnitude of the proposed Bayfront project, annexation to CFD No. 5 may not be a viable option, as this district was designed with smaller projects in mind. In a November 9, 1990, letter (copy enclosed) to Bill Barkett, John Linn, the District's Assistant Superintendent for Business Management, advised that formation of a new CFD or other alternative form of financing, along with participation of necessary land, should be considered. Participation in a CFD is designed to provide full reimbursement for facilities and land costs necessary to house children anticipated to be generated by a specific project.

JJ2 The proposed project, along with its non-residential component, could generate up to 1536 new students, which equates to over two new schools. However, since not all children generated by the non-residential component of the project will reside within the Easter and Vista Square attendance areas, it can reasonably be assumed that some can be accommodated in other District schools with capacity. Therefore, two elementary school sites of 10 net usable acres each are needed to serve the project. Financing for these sites must be provided through a CFD or alternative financing mechanism.

Comment II - Chula Vista Elementary School District

JJ1 Page 3-165 has been corrected, accordingly. The remaining comment is acknowledged. Please see Response II.

JJ2 These comments are acknowledged. Please see Response II.

JJ3 When a specific project is proposed, the appropriate requirements for that project would be included within the project-level EIR. The school districts will also have an opportunity to comment on that document.

RECEIVED

KAY 22 1991

Community Development Dept.

REcirculated Draft Environmental Impact Report

May 21, 1991
Ms. Robin Putnam
Page 2
RE: Recirculated DEIR - Midbayfront LCP Resubmittal No.
8 Amendment

The project proponent has indicated that locating a school site(s) within the project boundaries is not feasible and the District has indicated a willingness to consider off-site locations which meet District and State criteria. In a December 20, 1990, letter to Bill Barkett (copy enclosed), the District suggested that Chula Vista Investors work with the City's Redevelopment Agency to locate these school sites. Without specific locations identified and costs estimated, it is not possible at this time to project land costs. However, at the time the taxing formula is developed for the CRD, these costs will be calculated and factored in.

JJ3 Given that specific sites are not included in the project submittal, it is essential that any approvals be conditioned with the requirement to provide two, ten net usable acre school sites which are acceptable to the District.

Thank you for the opportunity to comment. If you have any questions, please contact me.

Sincerely,

Kate Shurson

Kate Shurson
Director of Planning

KS:dp

cc: John Linn



CHULA VISTA ELEMENTARY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619 425-9600

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

BOARD OF EDUCATION

JOSEPH J. CUMMINGS, PH.D.
SHARON GILES
PATRICK JUDD
JUDY SCHULBERG
FRANK A. TARANTRO

SUPERINTENDENT

JOHN F. VUCIN, PH.D.

Comment JJ - Attachment 1

November 9, 1990

RE: School Mitigation for Midbayfront Project

Dear Mr. Barkett:

In reviewing facility and revenue needs associates with the Midbayfront with our financial consultant, it appears that annexation to Community Facilities District (CFD) No. 5 may not be a viable option. This district was designed to allow smaller projects to annex, not serve a major development. It does not appear that annexation to this CFD No. 5 District will provide mitigation for a project the size and magnitude of the Midbayfront. It may be necessary to consider formation of a new CFD or other alternative form of financing, along with provision of needed land. We will continue to analyze this with our consultants and advise you of our recommendation.

In the past you indicated your wish not to locate elementary facilities within your project. If that is still the case, and the required acreage cannot be provided, given that the project is located within a redevelopment project area boundary, coordination with the Chula Vista Redevelopment Agency may be needed in order to provide the District with land in an acceptable location(s).

The Program Summary you submitted differed significantly from the Developer's Proposal as shown in the Draft EIR. Total number of apartment and hotel units were reduced, as well as square footage for all uses, and 640,000 square feet of Professional/Administrative development was deleted. Does the Program Summary represent the project as modified? In addition, the DEIR indicated that some of the land proposed for non-residential development is owned by Rohr Corporation. Since participation in a community facilities district requires a landowner vote, if the Rohr property is proposed to be included in a mitigation proposal, we need to be so advised and Rohr included in any discussion concerning CFD's.

We would be happy to discuss this further at your convenience.

Sincerely,
John E. Linn

John E. Linn
Assistant Superintendent
for Business Management

JEL:KS:dp
cc: Carl Kadie

CHULA VISTA ELEMENTARY SCHOOL DISTRICT

84 EAST "J" STREET • CHULA VISTA, CALIFORNIA 92010 • 619 425-9600

EACH CHILD IS AN INDIVIDUAL OF GREAT WORTH

Comment II - Attachment 2

December 30 198

BOARD OF EDUCATION

**PH.D. CUMMINGS, PH.D.
MARRY CUNNINGHAM
SHARON GILES**

Mr. William J. Barkett
Chula Vista Investors
864 Prospect Street
La Jolla, CA 92017

BRIEF COMMUNICATIONS

DODAK UND DAWRICK:

In response to your November 15, 1990, letter, we have met again with Carl Kadie, our Municipal Finance Consultant, regarding mitigation for your project.

One of the problems we're encountering is that, since you feel there is not enough land within the Midbayfront project to accommodate an elementary site, we must find that land elsewhere. Given the developed nature of the area, it's difficult to find land which would appropriately meet district needs. Our other Community Facilities Districts (CFD's) which are in place for major projects all provide for a school site(s) within the project boundary. Thus, the sites are designated and the cost can be estimated for

In the case of the Midbayfront, given that land is not available within project boundaries, costs are difficult to determine. The suggestion that Chula Vista Investors (CVI) work with the Chula Vista Redevelopment Agency was offered with the thought that the City's extensive redevelopment activities in the area might be one vehicle which could be utilized to assist in obtaining land which is appropriate

IV is responsible for provision of adequate land and financing of facilities to serve the children who will be generated by the project. Before the CFD formula can be calculated, cost of this land and potential location(s) must be determined.

our letter states that an alternative form of financing may be acceptable depending on costs to you. We are not necessarily recommending an alternative to the CFD; we wish to provide as much latitude as possible to you or any other developer in mitigating school impacts and if an alternative method is proposed, we would give it consideration.

December 20, 1990
Mr. William J. Barkett
Page 2
RE: Mitigation for Midbayfront Project

We are looking forward to hearing from you and receiving the information on land which is necessary to complete our analysis.

Sincerely,



Kate Shurson
Director of Planning

KS:dp

cc: John Linn

Comment KK

A. D. HINSHAW ASSOCIATES
6135 Mission Gorge Road • Suite 111 • San Diego, CA 92120-3413
(619) 280-2264

Comment KK - A. D. Hinshaw Associates

May 21, 1991

Ms. Robin Putnam
Chula Vista Redevelopment Agency
276 Fourth Avenue
Chula Vista, CA 92010

Re: Recirculated Draft EIR Midbayfront LCP Resubmittal No. 8
Amendment

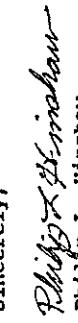
Dear Ms. Putnam:

The consultant team retained by Chula Vista Investors (CVI) has reviewed the Recirculated Draft EIR. Urban Systems Associates, Inc. and Dr. David D. Smith have prepared letters containing comments related to their particular areas of expertise. The comments are informational in nature.

The purpose of submitting these comments is to provide as much information as possible to the decision-makers. Chula Vista Investors requests that the Agency note the comments and include them in the Final EIR. Responses to the comments are not anticipated, nor requested.

If you have any questions concerning the attached information, please call me.

Sincerely,


Phillip L. Hinshaw

KK1 These comments are acknowledged; responses have been included to provide a comprehensive presentation of relevant information.

KK2 The traffic impacts detailed in the Recirculated Draft EIR for the intersections of E Street/Broadway, F Street/Broadway, and Interstate 5/E Street were based on study area land uses shown in the adopted Chula Vista General Plan and various project alternatives tested for the Midbayfront Project Site. The impacts at these locations did assume the partial development of the Woodlawn Avenue corridor area. The source for the build-out land uses for this area was the City of Chula Vista General Plan and it was determined that approximately 50% of the build-out land uses would be developed in the time frame associated with the build-out of the proposed LCP Resubmittal. Table I summarizes the most recent land use and trip generation estimates for the Woodlawn Avenue corridor as proposed in the General Plan. As shown on Table I, a total of 52,841 daily trips are planned for this area in the General Plan. The Recirculated Draft EIR traffic analysis assumed approximately 20,000 of the 52,841 daily trips would be generated by the Woodlawn Avenue corridor area under the cumulative analysis.

The traffic generated by the Woodlawn Avenue corridor development would be distributed on E Street, F Street, G Street, H Street, and Broadway. A portion of this traffic would also utilize Interstate 5 interchanges at E Street and H Street to access the Woodlawn Avenue area and other proposed developments within central Chula Vista.

It is acknowledged that when the project(s) associated with the proposed LCP Resubmittal are reviewed at the project level, additional traffic impact analyses will be conducted. At that future time more accurate cumulative data may be available for determining impacts and required mitigation at the various phases of project implementation. This review will provide the best method determining actual impacts and mitigation measures required for each phase of project implementation. These mitigation measures developed at the project level review may modify the mitigation measures which have been recommended in the Recirculated Draft EIR traffic analysis.

KK3 It is recognized that the data collected by the City of Chula Vista in February of 1991 reflects a greater amount of traffic diversion to State Route 54 (SR-54) freeway for E Street than was originally assumed in the traffic analysis for the Recirculated Draft EIR. This high degree of traffic diversion (33%) reflects an interim condition. It is important to recognize that the interchange at SR-54/Interstate 5 is not yet complete. Upon the completion of all ramps to and from the south at this freeway to freeway interchange it is recommended that additional traffic counts be taken. These traffic volume counts taken after the completion of the SR-54 project should accurately define the existing traffic volume conditions on these study area segments in the future. It is anticipated that these new traffic volumes will be defined prior to the

Attachment
Urban Systems Associates, Inc. letter dated 5/21/91
Dr. David D. Smith letter dated 5/22/91

File \Philip\Letters\Putnam.231

May 21, 1991

4540 Kearny Villa Road, Suite 106
San Diego, CA 92123-1573
(619) 560-4911 telephone
(619) 560-9734 facsimile

Mr. Philip Hinshaw
A.D. HINSHAW ASSOCIATES
6136 Mission Gorge Road, #111
San Diego, CA 92130

RE: Recirculated DEIR Midbayfront LCP Resubmittal No. 8 Amendment Volume II, April 1991

Dear Phil:

Table 1
TRIP GENERATION ZONES
ADJACENT TO WOODLAWN AVENUE

| TAZ # Old/New | SANDAG Code | Land Use Category | Units/ Acres | Trip Rate/ Unit | | Trip Generation |
|------------------|----------------|----------------------------------|-----------------|-----------------------------|--------------------|--------------------|
| | | | | 130 Multiple Residential | 140 Hotel/Motel | |
| 359/55 | | | | 11 | 200 | 2,114 |
| | | | | 3 | 80 | 2,200 |
| | | Total | | | | 2,400 |
| | | | | | | 6,714 |
| 376/56 | | | | 691 | 7 | 4,837 |
| | | | | 10 | 800 | 8,000 |
| | | Total | | | | 12,837 |
| 390/57 | | | | 540 | 7 | 3,780 |
| | | | | 5 | 650 | 3,250 |
| | | Multiple Residential | | 2 | 5 | 10 |
| | | Community Shopping Center | | | | |
| | | Parks | | | | |
| | | Inland Water | | | | |
| | | Total | | | | |
| 400/540 | | | | 10 | 750 | 7,500 |
| 364/538 | | | | 11 | 750 | 8,250 |
| 380/539 | | | | 14 | 750 | 10,500 |
| | | Total Study Area Trip Generation | | | | 52,841 |

Source: SANDAG - Adopted City of Chula Vista General Plan Circulation Element

Note: TAZ= Transportation Analysis Zone

Urban Systems Associates has the following comments regarding the above-referenced DEIR. These comments are intended to be included for informational purposes only and are not submitted to elicit any further evaluation, traffic studies or analysis. This information may indicate some level of service improvement. However, we acknowledge that this information should be addressed at the project level rather than at the plan level. Therefore, we would prefer that the response to this letter of comment be comment noted.

1. Woodlawn Avenue Corridor Redevelopment, Page 3-169 DEIR Volume II:

KK2 The traffic study assumes a total trip generation of 40,000 ADT as new trips from the Woodlawn Avenue Corridor Redevelopment area. This assumption seems too high since this would equate to the level of traffic expected from two million square feet of office or one million square feet of retail uses, which seems to be a high density of use for the Woodlawn Avenue Corridor. This amount of development potential needs to be verified as a reasonable assumption. If the assumption is too high, then the suggested response to this comment is to acknowledge the high assumption and conclude that traffic impacts to I-5, E Street, Broadway and F Street have been overstated and represent a worst case scenario. In addition, because of the possibly overstated traffic impacts, the recommended mitigation measures needed, when analyzed at the project level, may be less than those mitigation measures listed in the Recirculated DEIR.

2. Existing Traffic Volume on "E" Street Too High - Pg. 3-169/3-170 and Figure 3-XV:

KK3 The supplemental traffic study for Alternate 8 shows 25,000 ADT for existing volumes compared to 37,200 ADT stated in the text of the Recirculated DEIR for "E" Street between I-5 and Woodlawn Avenue. The supplemental study uses the latest City provided volume counts taken in February 1991 after the SR-54 direct connector ramps to I-5 north were completed and opened to traffic. A lot more traffic was diverted to the SR-54 freeway from "E" Street than originally assumed in the report and this should be discussed in the response to this comment.

Because of the lower existing volumes on "E" Street, any future peak hour traffic impacts that were determined using existing intersection turn movement volumes that were increased in volume to account for future growth may be overstated. Therefore, the recommended mitigation ultimately needed for traffic impacts, when analyzed at the project level, may be less than those traffic mitigation measures listed in the Recirculated DEIR.

Recent P.M. peak hour counts conducted by Traffic Counts, Inc. of Costa Mesa at the I-5/E Street ramp intersection, included as Attachment 1, confirm that the diversion of traffic from "E"

Street to SR-54 was greater than predicted in the traffic report for the Recirculated DEIR. Attachment 2 shows the "existing 1990" peak hour counts used to determine future year 2000 counts by factoring upwards to account for growth. As shown on Attachment 1, the southbound to eastbound left turn at the southbound off ramp decreased by approximately 42 percent, not 15 percent as assumed, and the westbound to northbound right turn at the northbound on ramp decreased by 37 percent, not the predicted 15 percent.

The effect of the actual diversion from the I-5/E Street ramps, and the additional diversion when the SR-54/I-5 direct connector ramps are completed for traffic to I-5 south of "E" Street, will be to reduce the predicted turn volumes for year 2000 for those turns that were increased from existing peak hour volumes to account for growth. These reduced volumes at critical movements could result in better levels of service than currently predicted in the Recirculated DEIR. Therefore, the traffic mitigation measures identified, when analyzed at the project level may be less than those traffic mitigation measures listed in the Recirculated DEIR. As an example, Attachment 3 shows year 2000 P.M. peak volumes at the interchange ramps as included in the Recirculated DEIR, while Attachment 4 shows the same volumes adjusted for the actual diversion now in effect. It can be shown that mitigation at the interchange does not depend on providing a dual left turn for the eastbound to northbound left turn onto the I-5 northbound on ramp, and would not require restriping or widening of the existing overpass.

3. Reduction in Intersection Capacity Due to Trolley Gates, Pg. 3-170 DEIR:

KK4 The Recirculated DEIR discussion on trolley gates concludes that trolley operations will reduce the amount of available capacity by approximately 13 percent. However, the supplemental traffic study on Page 2-10 discusses actual saturation flow rates and concludes that because of high actual saturation flow rates, "that the increase of trolley frequency in the future is almost fully accounted for" in the methodology by JHK. This type of discussion should also be included in the DEIR text. The Recirculated Draft text implies that if the ramp levels of service are at "D" or "C" in the future, the 13 percent reduction in capacity would result in lowered levels of service, but actually, the effect of future trolley delay has already been included in the capacity calculations.

4. Off-Site Mitigation, Pg. 3-191, DEIR Volume II:

KK5 We agree with the conclusion that "traffic from the proposed project is only an incremental contribution to the Broadway/F Street impact."

Also stated in Appendix H Supplemental Traffic Study, Figure 5-1 (Attachment 5), is the assumption that only 25 percent of all new Bayfront trips will pass through the Interstate 5 interchanges and continue east to origins or destinations in Chula Vista. Figure 5-1 shows that the project traffic assigned to "F" Street is only 10 percent of the total, while 10 percent is also assigned to "E" Street, and only 5 percent to "H" Street. Therefore, the project traffic is only an incremental contribution to the Broadway intersections at "E" Street and "H" Street.

Assuming that the P.M. peak hour traffic is ten percent of project ADT, then the five percent project contribution to traffic at the Broadway/H Street intersection is only 190 VPH, or less than four percent, compared to the total entering volume in year 2000 (Figure 5-8) of 5,322 VPH. The project contribution to the P.M. peak hour entering volumes at the Broadway/F Street intersections is only 380 VPH out of 3,933 VPH, or less than ten percent. The project contribution at Broadway/E Street is 380 VPH out of a total P.M. peak hour projection of 5,131 VPH entering, or approximately, seven percent of the total entering volume.

Mr. Philip Hinshaw
May 21, 1991

Urban Systems Associates, Inc.

Since the Bayfront project results in only incremental increases, mitigation at these off-site locations should be the responsibility of other developments (ie., Woodlawn Avenue Corridor Redevelopment), City C.I.P. projects, an assessment district, or a combination of sources contributing financially based on a fair share distribution of costs.

Also, since mitigation at these locations would occur at approximately the time of the Bayfront project's buildout, any project level mitigation monitoring program prepared should include the mitigation at these off-site intersections during the last phase of the project development.

5. Bay Boulevard Street Segment LOS, Pg. 3-178 DEIR, Volume II:

KK6 Bay Boulevard between "E" and "F" Streets is shown with a street segment level of service "E" under the no-build alternative and LOS "F" under the proposed project. Mitigation can be implemented that will result in LOS "C" for this segment of Bay Boulevard. There is currently 61 feet from the east curb to the center of the tracks. Widening to the west would allow construction of an additional lane. Parking removal would allow lane width straining measured from the west curb of 15.75 ft., 11 ft., 11 ft., and 15.75 ft. for the east curb lane. These lane dimensions would leave seven and a half feet clearance to the center of railroad tracks, which is within the clearance required by the railroad and M.T.D.B. The resulting four lane modified collector would have a daily volume capacity at LOS "C" between the City Standard Class I collector (22,000 ADT at LOS "C") and Class II collector (12,000 ADT at LOS "C") of 17,000 ADT, which would result in LOS "C" for the 16,900 ADT projected for the proposed project alternative in year 2000.

If you or City staff have any questions regarding Urban System's comments, please give me a call.

Sincerely,

Sam Kab
Sam P. Kab II
Senior Project Manager

SPK:sjb

Attachments (5)

cc: Bill Burkett
Matt Peterson

002785F

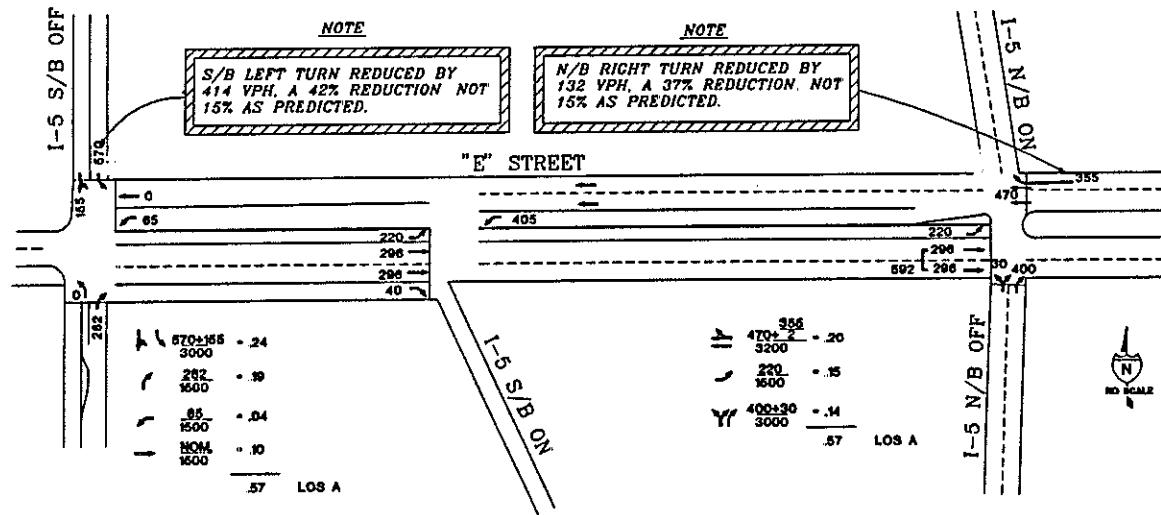
cwb24/17C

KK6 The proposed improvements outlined in comment number five (5) to provide 15.75-foot curb lanes and 11-foot interior lanes is a non-standard cross-section and is not identified in the City's General Plan Circulation Element. From a traffic operational perspective, it may be more prudent to operate this roadway as a three-lane section and have the benefit of shoulder sections to allow for emergency parking and/or bicycle lanes. It should be noted that the capacity at the intersections of Bay Boulevard at E Street and F Street have been shown to be sufficient given the mitigations that are proposed in the Recirculated Draft EIR. More detailed analysis of the proposed Bay Boulevard street segment widening will be undertaken during project-level environmental review.

8P-04-068 07/12/91

ATTACHMENT 1

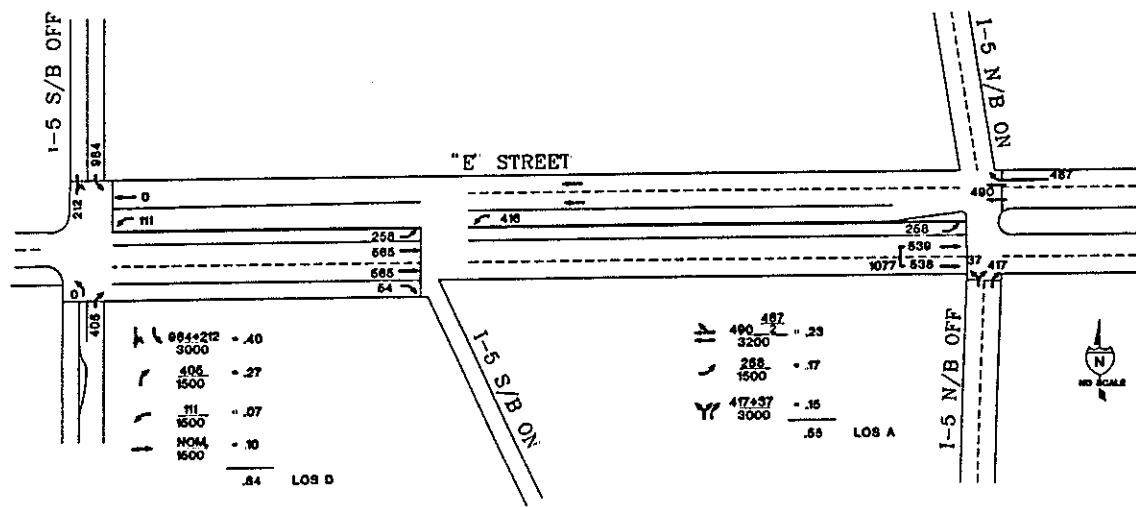
LATEST COUNTS
5/14/91
AFTER SR-54 DIVERSION
, P.M. PEAK (4:00-5:00 P.M.)



CHULA VISTA BAYFRONT

URBAN SYSTEMS

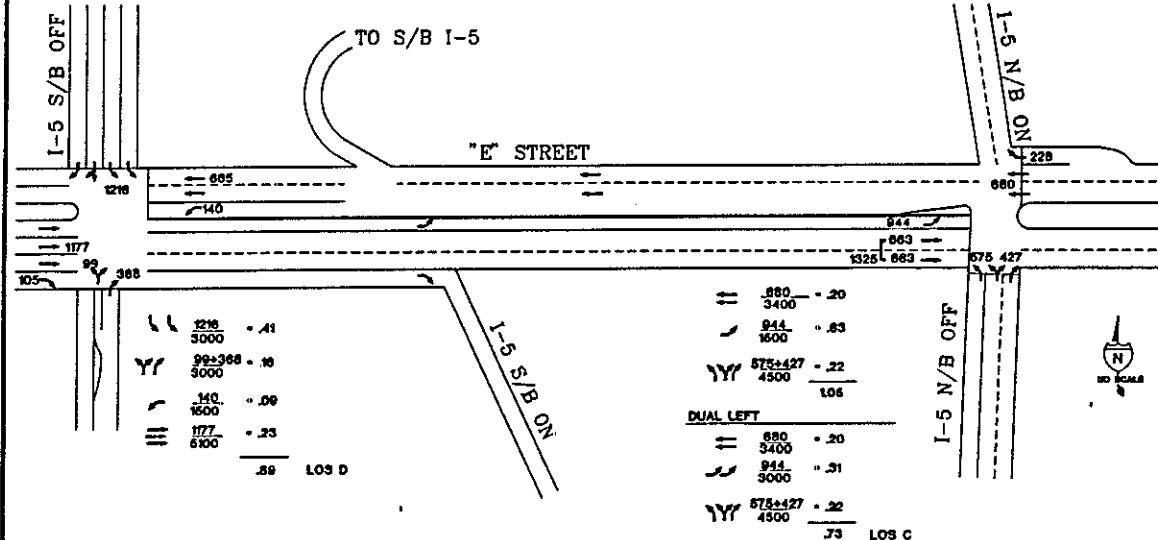
ATTACHMENT 2
APRIL 1991 DEIR
BEFORE SR- 54 DIVERSION
EXISTING P.M. PEAK (4:00-6:00 HIGHEST PEAK)



CHULA VISTA BAYFRONT

URBAN SYSTEMS

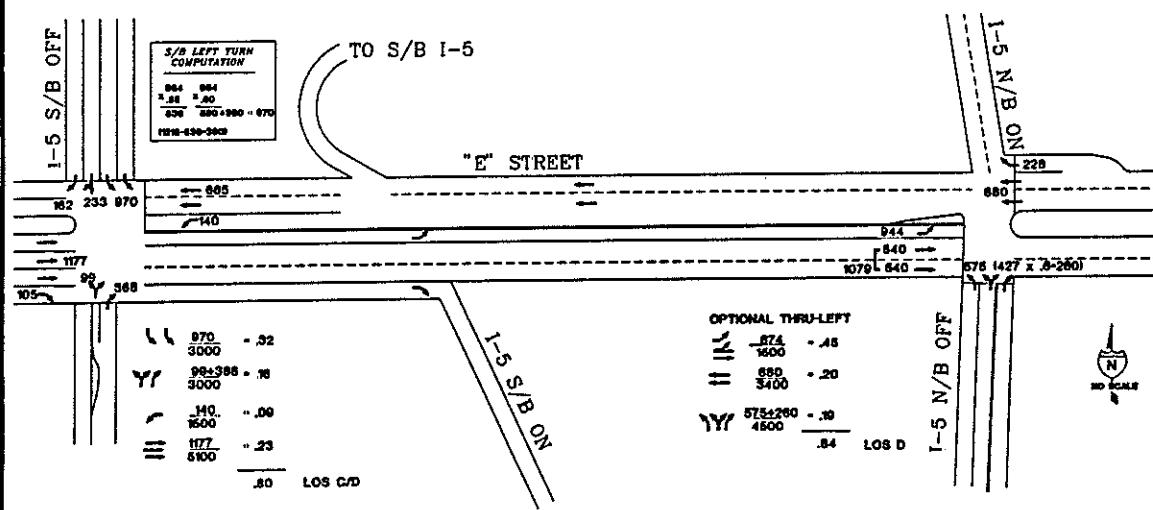
ATTACHMENT 3
YEAR 2000 P.M. PEAK
WITHOUT ACTUAL SR-54 DIVERSION
(15% ONLY)



CHULA VISTA BAYFRONT

URBAN SYSTEMS

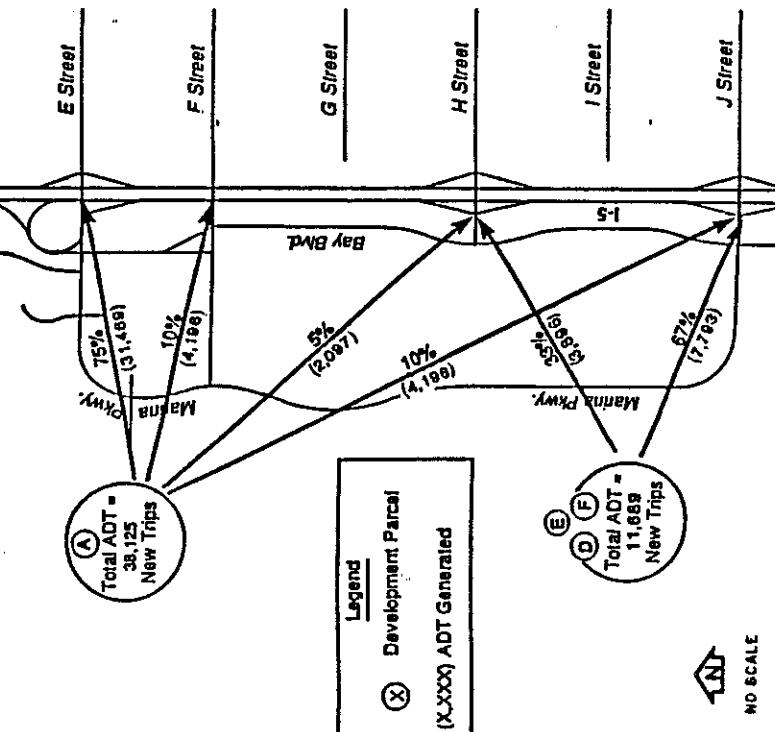
ATTACHMENT 4
YEAR 2000 P.M. PEAK
WITH 40% DIVERSION TO SR-54



CHULA VISTA BAYFRONT

URBAN SYSTEMS

ATTACHMENT 6
TRIP DISTRIBUTION
ALTERNATIVE 8



NOTE:
 The trip interaction rate between the freeway (I-5) and the proposed project is approximately 75% (28,600) while the the interaction rate between the proposed project and Central Chula Vista is approximately 25% (9,525). Thus 25% of all new Baymont trips will pass through the Interstate 5 Interchanges and continue east to origins or destinations in Central Chula Vista.

SOURCE: Supplemental Traffic Data Analysis
 JEK & Associates

CHULA VISTA BAYFRONT
— URBAN SYSTEMS —

DAVID D. SMITH AND ASSOCIATES

ENVIRONMENTAL CONSULTANTS
90-518 EIR-SR
May 22, 1991

MEMORANDUM

To: Phil Hinshaw and W.J. Barkett

From: David Smith

Re: Clarification of statements in City of Chula Vista
Midbayfront Recirculated Draft EIR.

Per your request I have reviewed the Midbayfront
Recirculated Draft EIR and have the following comments:

KK7 1. Regarding Geology/Soils/Groundwater, page 3-11 of
Volume II includes the statement:

"Potential impacts associated with seismic risk (ground
displacement and liquefaction) require additional study to
determine actual impact significance. Impacts associated
with seismic risk are therefore considered significant and
not mitigated at this level."

Although not mitigated at the Plan Level, it is
important to recognize that the additional geotechnical
studies necessary to assess seismic risk (as called for
above) would be carried out at Project Level. The results
of these studies would provide the information needed to
determine: a) impact significance, and b) the design
requirements necessary to mitigate these impacts.

KK8 2. Re Hydrology/Water Quality, page 3-22 of Volume II
includes the statement:

"Remaining hydrology/water quality impacts of flooding
from storm drain overflow, erosion from additional,
siltation/chemical contamination require additional
information before their impact significance or mitigation
feasibility can be adequately addressed. These potential
impacts therefore remain significant and not mitigated at
the plan level."

It's important to recognize that the additional
information to be collected in connection with the project
level design work would determine the level of significance
of potential impacts, if any, and the design requirements
needed to mitigate those impacts where such would be
anticipated.

BOX 1338, LA JOLLA, CALIFORNIA 92038 TELEPHONE (619) 453-2210

KK7 These comments are acknowledged.

KK8 These comments are acknowledged.

KK9 This comment is acknowledged.

SP-04-006 07/12/91

90-518 EIR-SR
May 22, 1991

In summary, for both the Geology/Soils/Groundwater and Hydrology/Water Quality categories, the impacts called out here as "Significant, Not Mitigable at Plan Level" are routinely mitigated at the Project Level by use of conventional design and construction procedures. In short, there is virtually no doubt that mitigation measures for these impacts are entirely feasible.



David D. Smith, Ph.D.
Environmental Scientist

Comment LL

PC Minutes -3- May 2nd 1991

**VERBATIM TESTIMONY FOR PUBLIC HEARING ON RECYCLED DRAFT
EIR 89-08 HELD MAY 22, 1991**

Comment II - Public Hearing Testimony

- L1** My name is Laura Hunter. I'm from the Environmental Health Coalition, 1844 Third Avenue, San Diego. I spoke at the last public hearing on the first EIR, and we are really pleased with the revised EIR on a number of levels. It includes much more detailed information from the project proponent, and many of the mitigations proposed are very welcome additions to the EIR; and we were very pleased to see that. We are also happy to see the inclusion of alternative 9, the alternative incorporated in response to public comment. I wish I had known it was going to happen, because that is a really good thing and we're happy to see that. We'd like to thank the project proponent for having done that. There are still a very few changes that we do want to comment further on. We have submitted written comments, and I just wanted to add just a couple more elaborations on those tonight. We do have concerns about the characterization of pesticide use within the project and the EIR which we have outlined in our letter. We would like to submit an additional article tonight from the Daily Transcript on data gap and pesticide evaluation. Environmental Health Coalition, as you may or may not know, is a toxic watchdog group, and we have a whole campaign focused at pesticides, and so I had the pesticide person look at that and it still is a very important area that needs to be looked at, so I will submit that into the record tonight. The data gap in the evaluation of a lot of the pesticides, even if they are EPA registered, they still do not have all the information in, especially in terms of the effects on fish and water and mixing with other things. So, even if the pesticide is EPA registered, it still does not mean it's safe and it's not going to be problem for those neighborhood wetland areas. So, we'd like to see that language changed to "possible." If the project moves into the project EIR stage, we hope that some larger mitigations will be incorporated. A water reclamation facility which maybe could be considered as another water source for the lagoon, since that will still be an issue, passive and solar energy use, a reduction of dependence on the automobile will all help to reduce the negative effects to the environment from this project. It is interesting to note that in the recent approval of the Navy's bayside project and yesterday's discussion of the Port District of the new Seaport Village expansion, both of these decisions allowed for reduced parking allowances because they expected ridership of mass transit to be increased so much over the next lifetime of wherever we're around. This is a healthy and a necessary trend in development decision making, so any efforts that can be made to reduce the use of the car and encouraging people to use their car, we would certainly welcome and think would be very healthy. We would also request the project proponent's contact to the developer of the De Anza Hotel, a project in Mission Bay. They are also building a huge project in a sensitive wetland area, and they are working to design many environmentally sensitive practices for that project. The effects of high density and toxics use on the bay is still a primary concern for Environmental Health Coalition, and we ask that the statement which appears in the first EIR which read "Since potential for contaminant discharges cannot be estimated at this time, the impact is considered to be significant and unmitigable" should be reinstated. We would support the certification of this EIR if the language on pesticides is

changed, as recommended in our letter, and if the projects named in our letter are added to the accumulative effects to be evaluated. Thank you.

Chair Grasser Horton: Peter Watry.

LL2

Madam Chairman, members of the Commission, my name is Peter Watry. I live at 81 Second Avenue, and I'm speaking on behalf of Crossroads. First of all, Madam Chairman, you and the Commission will be glad to know I didn't have much time to do my homework, so this will be a brief thing. I've been busy other ways trying to take care of the bayfront problem. So I want to say one thing tonight, and I have one question to ask. The thing I want to say is I'm just outraged at this category called "significant and not mitigated at the plan level." That clearly implies it can be corrected later on. And that should be stricken from the thing. Either it is mitigable, it can be fixed or it can't be fixed. And I object to that thing. Give me the example of schools. It's clear in the project that the project will call for, I think, it's two elementary schools and part of a high school and part of a junior high school, and it's clear in the document that it's not going to be on the developer's land. It's clear in the document that it's going to be east of I-5. It's also clear in the letters from the School District they have no property. And so there's no place to build the school. So I say that's an impossible condition to handle. Now, if I'm wrong, I'd like to know it now and so should you like to know it now. You should demand to know those answers now and not later on. They have moved traffic even though some of the levels of service are "F" and not mitigable to the second category "significant and not mitigated at the plan level." If traffic problems can be solved, you ought to know that now before you approve the EIR and not afterwards. So I strenuously object to that new category called "significant and not mitigable at the plan level." As I look at all those things, they are not mitigable (I hate that word) they're not fixable at any level; and if they are, you ought to know now and the public ought to know now. Now the question I have is about traffic. Before you'll remember they went through and they used the ICU method and they showed some kind of silly levels of service. That's because the ICU method, as you know, the theoretical method where they take all the lanes and the traffic times and also all that, and they figure out what the capacity ought to be and then theoretically what's the traffic compared to the theory. And that's okay on a normal intersection but what we have here is that trolley gate, so that changes everything. So that was my objection last time. So, now they've done it by the HCM method, and the HCM method does it by delay. Now, the question I have, if you're someplace away from the trolley gate, if you're on a normal intersection and you do a study by the ICU method and you do a study by the HCM method, they might come up with the same level of service or maybe on one intersection one might be higher, one might be lower. I can understand that. But we have a trolley gate involved. It simply cannot be that the ICU level of service can be better than the HCM. The HCM measures delay, and so the HCM measure must necessarily be a worse, lower level of service than ICU, yet they don't show that. So my question is, when they did the HCM method, did they take into consideration the trolley, the trolley gate? Now, they talked about the trolley gate, and they talked about the increase in the trolley's schedule and so forth, but nowhere could I find a sentence I was looking for that said when they did their HCM study they took into account the gate thing, the gate being down. Because if they did,

they shouldn't come out with a better level of service. That's my question. My only comment is I urge you, I beg you to make them take out that category called "significant and not mitigable at the plan level." Either they can figure out how to mitigate it or they can't, and you should know this at this time before you accept that EIR. Thank you.

LJL3 Commissioner Tugenberg: Mr. Watry, you mentioned that you didn't have time for your homework, but one of the letters in there regarding the high school or the junior high school said that they met with the applicant and the applicant would purchase vacated, I'm not sure what the word, vacated or vacated land adjacent to the junior high school and high school--that they would pay for the land that would be vacated to add to the high school and the junior high school.

Mr. Watry: I never saw where

Commissioner Tugenberg: I believe that the applicant agreed to that in this letter.

Mr. Watry: I saw that part. I didn't see where the land was. I thought I read all the letters; maybe I didn't. I never saw where they were going to go.

Commissioner Carson: I didn't either, and that's one of the questions I want to be addressed when they come up to the podium.

Mr. Watry: I should think it should be answered before and not after.

Commissioner Carson: I agree.

Mr. Watry: Thank you.

Chair Grasser Horton: Matthew Peterson.

Madam Chairperson and Members of the Planning Commission, my name is Matt Peterson with the law firm of Peterson and Price, representing Chula Vista Investors. First of all, we have no objection to extending the comment period through Friday for the Fish & Wildlife Service to submit their comments. We would, however, request that you close the comment period tonight as to all others. We're very concerned that this timeframe within which the EIR has been prepared, which is almost two years now, is becoming excessive in many senses; and, therefore, we would like you to close the comment period tonight. We would still receive the U. S. Fish & Wildlife letter and respond to that during the response to comment period. Secondly, we would request, and as summarized by staff, there have been very, very few comments received with this Recirculated EIR. Therefore, it leads you to believe, or leads me to believe, that a lot of the issues have been thoroughly analyzed and many people are satisfied with its contents. Because there are so few comments that have been received, we believe that it won't take staff very long at all to respond to those comments, and we would urge them to

direct them to respond to those in as quick a fashion as possible with the hope that we might be back before you with the final EIR in two weeks for the June 5 hearing. We believe that that is plenty of time within which the few comments that have been received can be responded to, and we would like to move this process along as soon as possible. Thank you very much.

Commissioner Carson: I have a question. I would like for you to address the one issue that was in here about the negotiating with the School District as to what pieces of property around Chula Vista Junior and Chula Vista High School would you be buying.

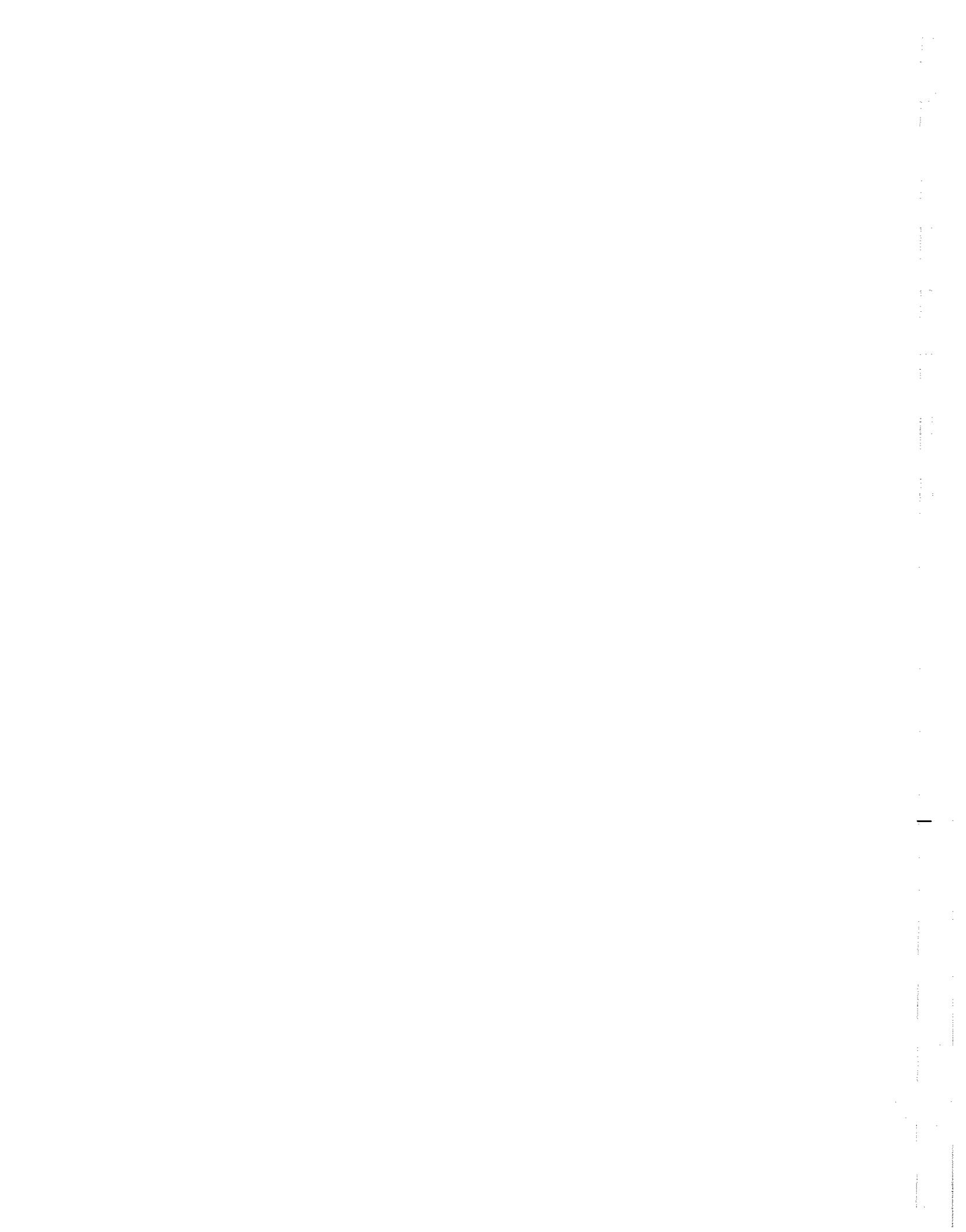
Mr. Peterson: I'm not party to those discussions. Perhaps another representative for Chula Vista ...

Commissioner Carson: Because when you look at the property around there, it's pretty tight, so I was just wondering where the pie in the sky is this land coming from?

Mr. Peterson: I really have no information on that at all. Certainly that's something we could present to you at the next hearing.

Chair Grasser Horton: Thank you. Is there anyone else wishing to speak to this item? Okay. At this time, we will close the public hearing exclusive of receiving comments from the Fish & Wildlife to May 24.

Chair Grasser Horton directed staff to take the information presented in finalizing the EIR.



FINAL
ENVIRONMENTAL IMPACT REPORT
MIDBAYFRONT LCP RESUBMITTAL NO. 8 AMENDMENT
VOLUME II

Prepared by:

Keller Environmental Associates, Inc
1727 Fifth Avenue
San Diego, California 92101

July 1991



**CITY OF
CHULA VISTA**

**Environmental
Impact Report**



FEIR
INSTRUCTION SHEET

This Final Environmental Impact Report (FEIR) for the Midbayfront LCP Resubmittal No. 8 Amendment consists of two volumes:

- *Volume I - Includes Comments and Responses received as a result of the Draft and Recirculated Environmental Impact Report (DEIR). These Comments and Responses are contained in Section 3.0 and Section 6.0, respectively. For ease of reference, comments on the Recirculated DEIR follow sequentially the lettered comments received on the original DEIR (starting with "EE"). The original or first DEIR was submitted by the City of Chula Vista for public review on August 6, 1990. Based upon the incorporation of new information and alternatives, a second public review period was held on the Recirculated DEIR between April 10, 1991 and May 22, 1991. The public review period on the Recirculated DEIR was extended until May 24, 1991 to allow additional response time for the U.S. Fish and Wildlife Service. Volume I also contains a summary of new information incorporated in the Recirculated DEIR, and an analysis of two new alternatives.*
- *Volume II - Contains text changes to the original DEIR and Recirculated DEIR. Text changes have been made based upon the comments received, as well as new information presented in Volume I. The Recirculated DEIR, Volumes I and II, the Comments and Responses, and text changes constitute the Final Environmental Impact Report (FEIR). Where revisions occurred in the DEIR text, shading is shown to highlight these changes. Changes to the Recirculated DEIR are shown in italics. Where text has been eliminated, lines are drawn through the narrative to indicate which language was deleted. Volume II also contains a re-analysis of all impacts to incorporate new information and to clarify plan-level versus project-level issues.*

Appendices also accompany the two volumes of the FEIR. The appendices are the final Technical Reports prepared by the City's EIR Project Team.



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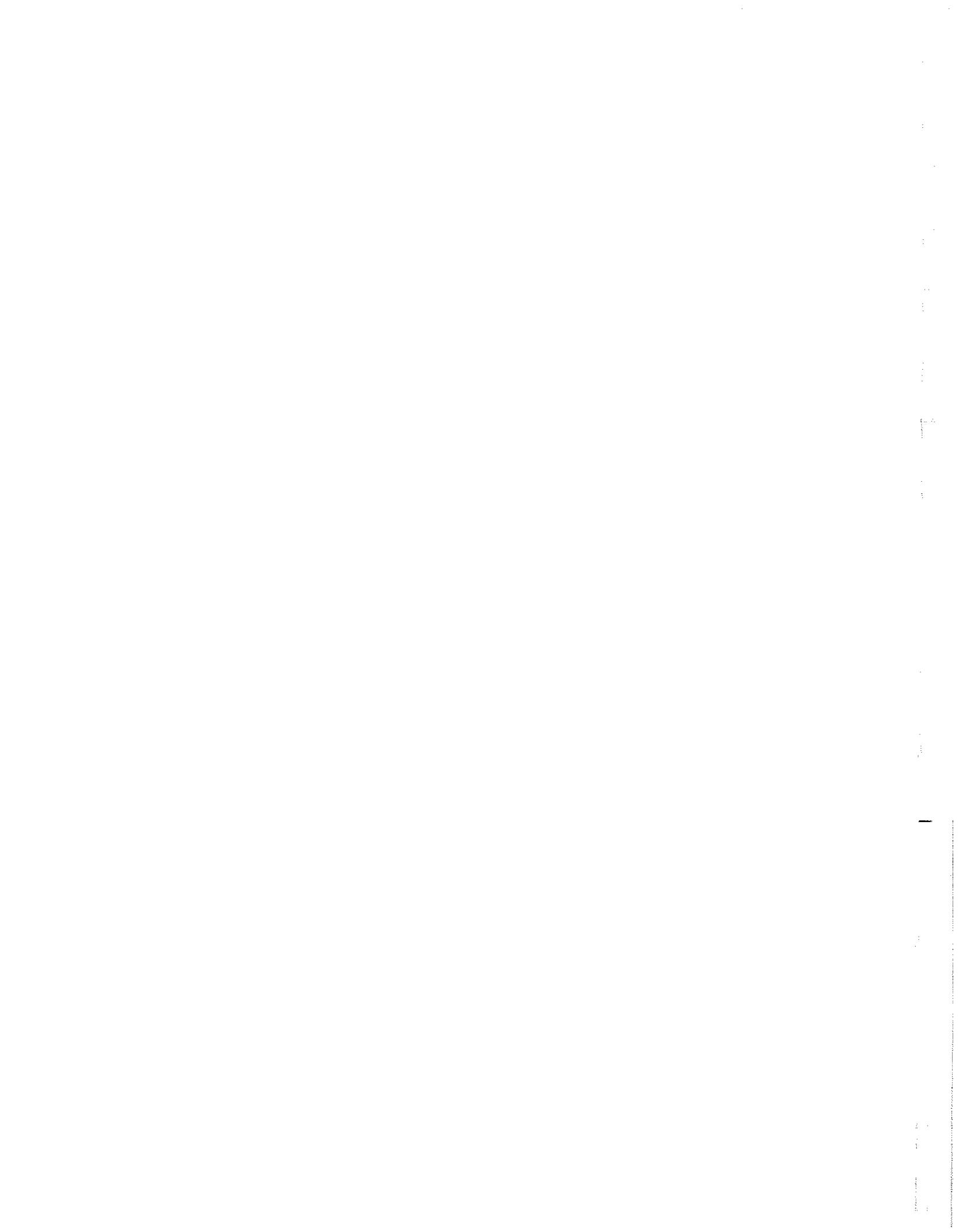


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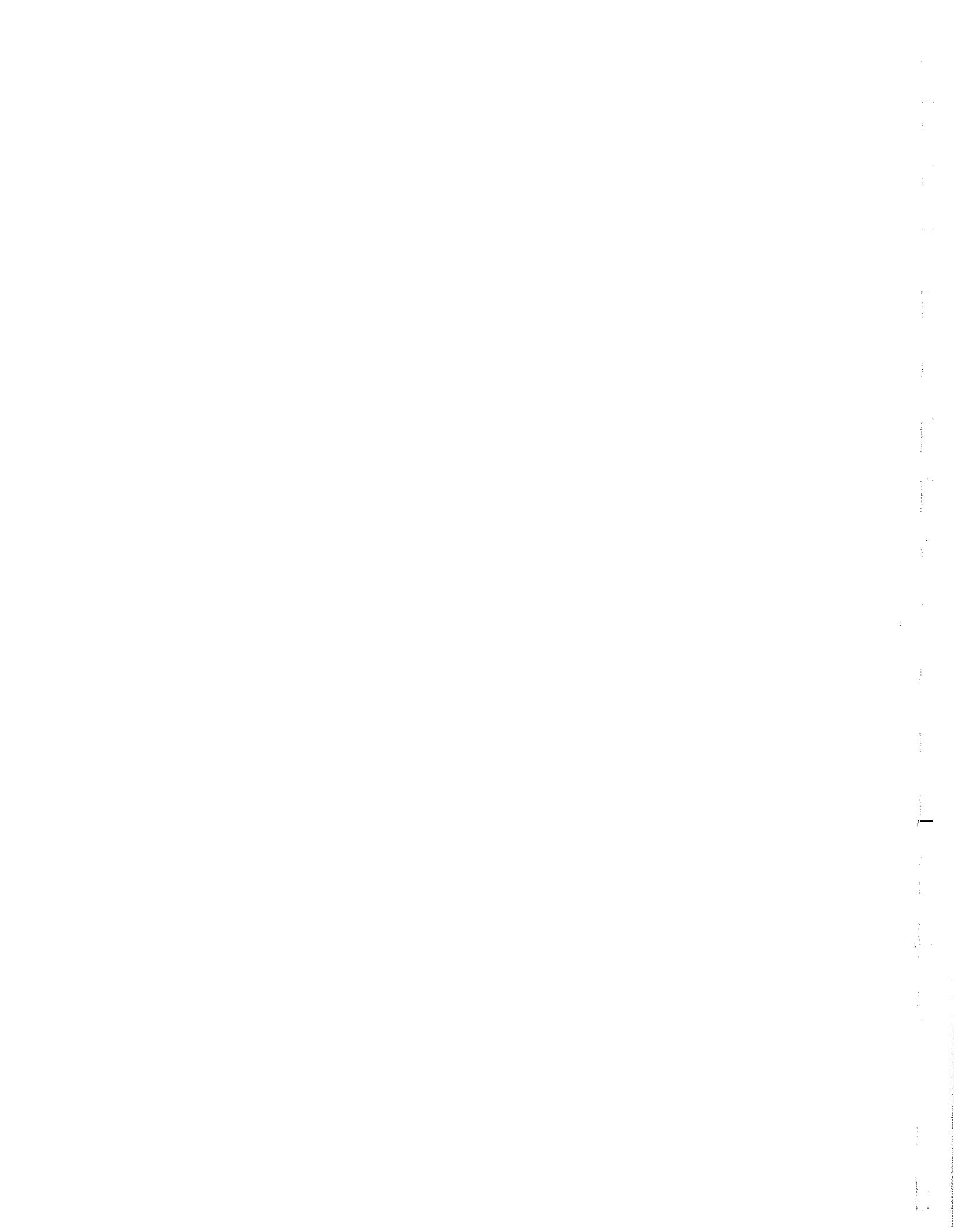
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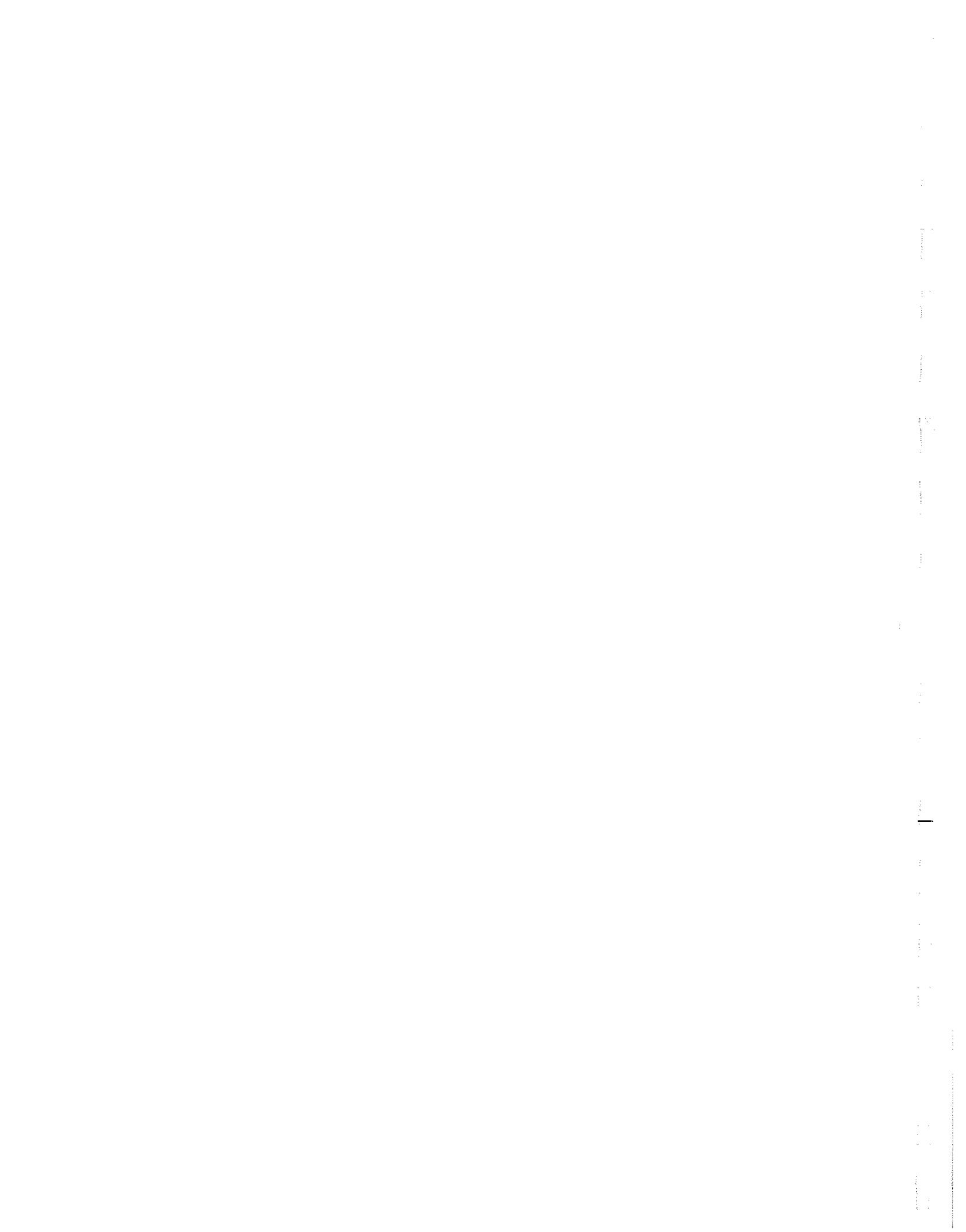
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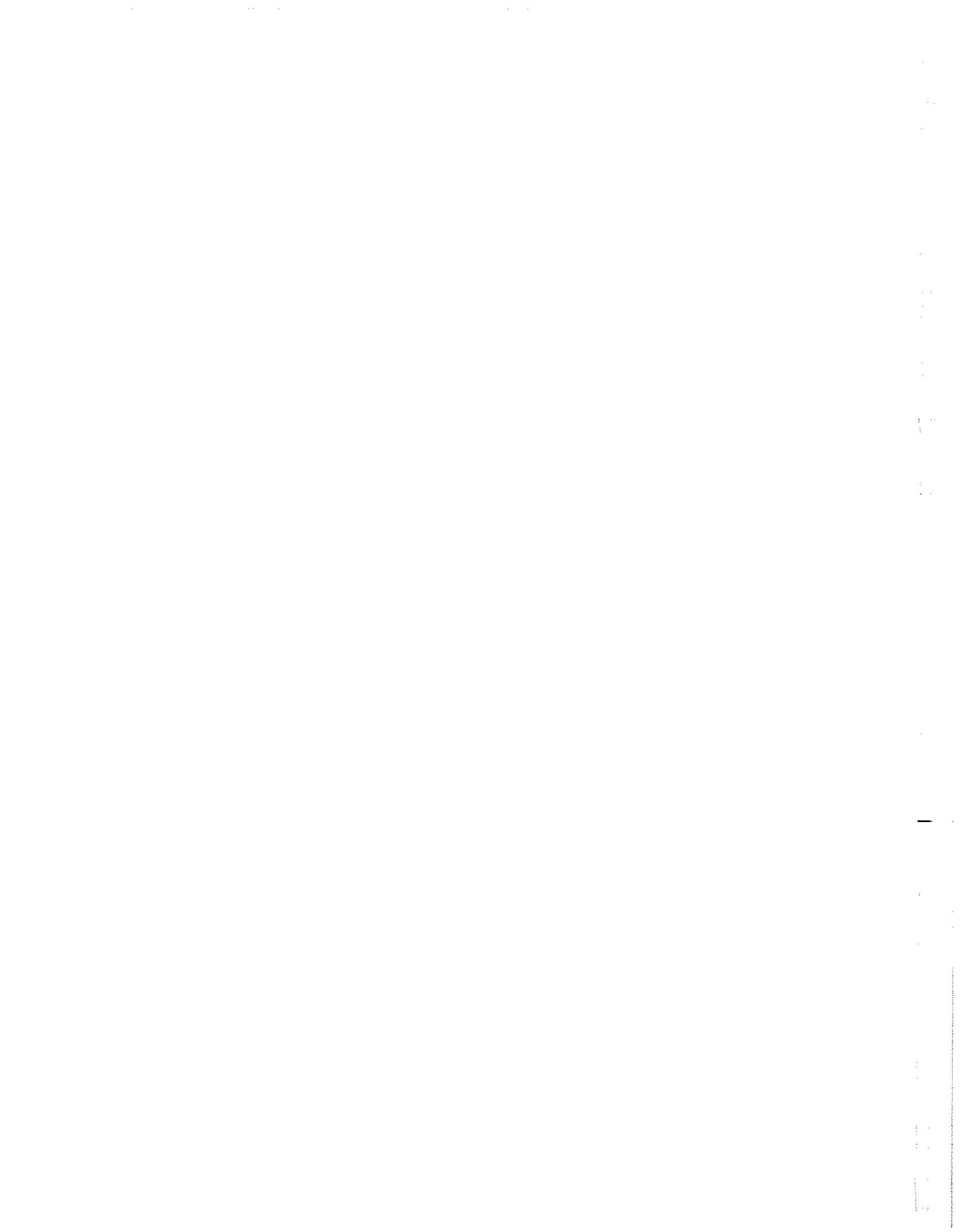
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City of Chula Vista Midbayfront LCP Resubmittal No. 8 DEIR

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1.0 INTRODUCTION AND SUMMARY

1.1 SCOPE AND PURPOSE OF THE REPORT

All governmental discretionary actions defined as projects by the California Environmental Quality Act (CEQA) require environmental assessment. Those actions which could result in significant impacts to the environment require the preparation of an Environmental Impact Report (EIR).

This document is ~~an~~ a Draft EIR which addresses the proposed Resubmittal of the City of Chula Vista's certified Local Coastal Program (LCP). The purpose of this DEIR is to provide an accurate and concise informational document which analyzes the environmental consequences of approval and adoption of the proposed Resubmittal. The DEIR is not a decision-making document, rather, the information contained herein is intended to provide guidance to the City of Chula Vista decision-makers in their consideration of approval of the Local Coastal Program Resubmittal (LCPR No. 8). Any change to the City's LCP would require corresponding changes to the City's General Plan, Zoning Code (implemented in this area by the Bayfront Specific Plan), and Bayfront Redevelopment Plan. This DEIR therefore also addresses changes to these plans.

Certification of LCPR No. 8 is the responsibility of the California Coastal Commission. Thus, if the City of Chula Vista approves LCPR No. 8, then the City would request certification of LCPR No. 8 from the Coastal Commission.

Usually, program or plan level EIRs are general in nature as no specific development is proposed. For this project, however, Chula Vista Investors, the property owner, has submitted to the City a development plan for a portion of the project area. This EIR thus evaluates this Development Plan as the ultimate potential action of the project. The Development Plan does not contain enough information to prepare a project-specific EIR; however, the information provided is analyzed to the extent available.

Also as part of the LCPR No. 8, the City is proposing to change land uses allowed under the existing certified LCP to open space, consistent with the recent establishment of the Sweetwater Marsh National Wildlife Refuge.

The scope of the DEIR was determined by the City to include those issues which could potentially be affected by approval and certification of LCPR No. 8. These issues include:

- Geology/Soils
- Mineral Resources
- Drainage/Ground Water
- Landform Alteration
- Conversion of Agricultural Lands
- Air Quality
- Aesthetics
- Mobile Noise Source/Acoustics
- Biology
- Archaeology/Historical Resources
- Paleontological Resources
- Land Use General Plan/Zoning
- Water Quality

The DEIR also examines alternatives to the project, growth inducing impacts, and other environmental summaries required by CEQA.

The City of Chula Vista is the lead agency for preparation of this DEIR. CEQA defines the lead agency as "the public agency which has the principal responsibility for carrying out or approving a project."

The environmental consultant responsible for the preparation of the DEIR is Keller Environmental Associates, Inc. of San Diego, California. Preparers of and contributors to this report are listed in Section 10.0.

This report is a Draft EIR. The City has solicited comments from responsible agencies and interested parties regarding potential environmental effects as described in this report by use of a Notice of Preparation (NOP). The NOP and comments received as a result of its circulation appear in Appendix A. Upon completion of the public review period of the Draft EIR, the receipt of public comments, and the Planning Commission hearing on the Draft, the Final EIR will be prepared. The Final will include this Draft as well as the comments and responses to this recirculated DEIR the comments. Prior to making a determination on the project, the EIR will be reviewed and considered by the Chula Vista City Council (decision-makers), who then have the authority to certify the EIR. Project approval is a separate action. If the Council approves the project, and the EIR defines significant, unmitigable impacts, then Findings and a Statement of Overriding Considerations must be made, with substantial evidence presented to support them.

After the City actions on the EIR and the project have been completed, then the City of Chula Vista will become the applicant in requesting certification of LCPR No. 8 by the California Coastal Commission. The City will submit this EIR to the Coastal Commission as part of its LCP Resubmittal application package.

1.2 SUMMARY OF IMPACTS AND MITIGATION

This section provides a summary of the environmental analysis that was conducted for each of the issue areas. The potential impacts of the project and the alternatives are identified, as well as any associated mitigation measures. Table 1-1 presents the a comparison of impacts of the project and each of the alternatives as originally reported in the August 1990 DEIR. Revised Table 1-1-A subsequently shows the reanalysis of impacts, based upon new information incorporated in this recirculated DEIR and distinctions that have been made between project-level and plan-level issues. For each of the impacts identified as significant and mitigable in revised Table 1-1-A, the associated mitigation measures are listed on Table 1-2. As stated throughout the report, all mitigation measures should be implemented and monitored via a Mitigation Monitoring Program.

Reevaluation of Impact Significance and Mitigation Measures Refinement

The project team has re-evaluated the impacts identified in the Draft EIR (August 1990) based upon new information that has been provided by the applicant and his consultants. The new information submitted by the applicant is summarized in Volume I, Section 2.0 of

Table 1-1

Note: All impacts on Table 1-1 have been re-evaluated based upon new information provided by the applicant, and based upon a refinement of significance definitions. See Table 1-1-A for the revised table.

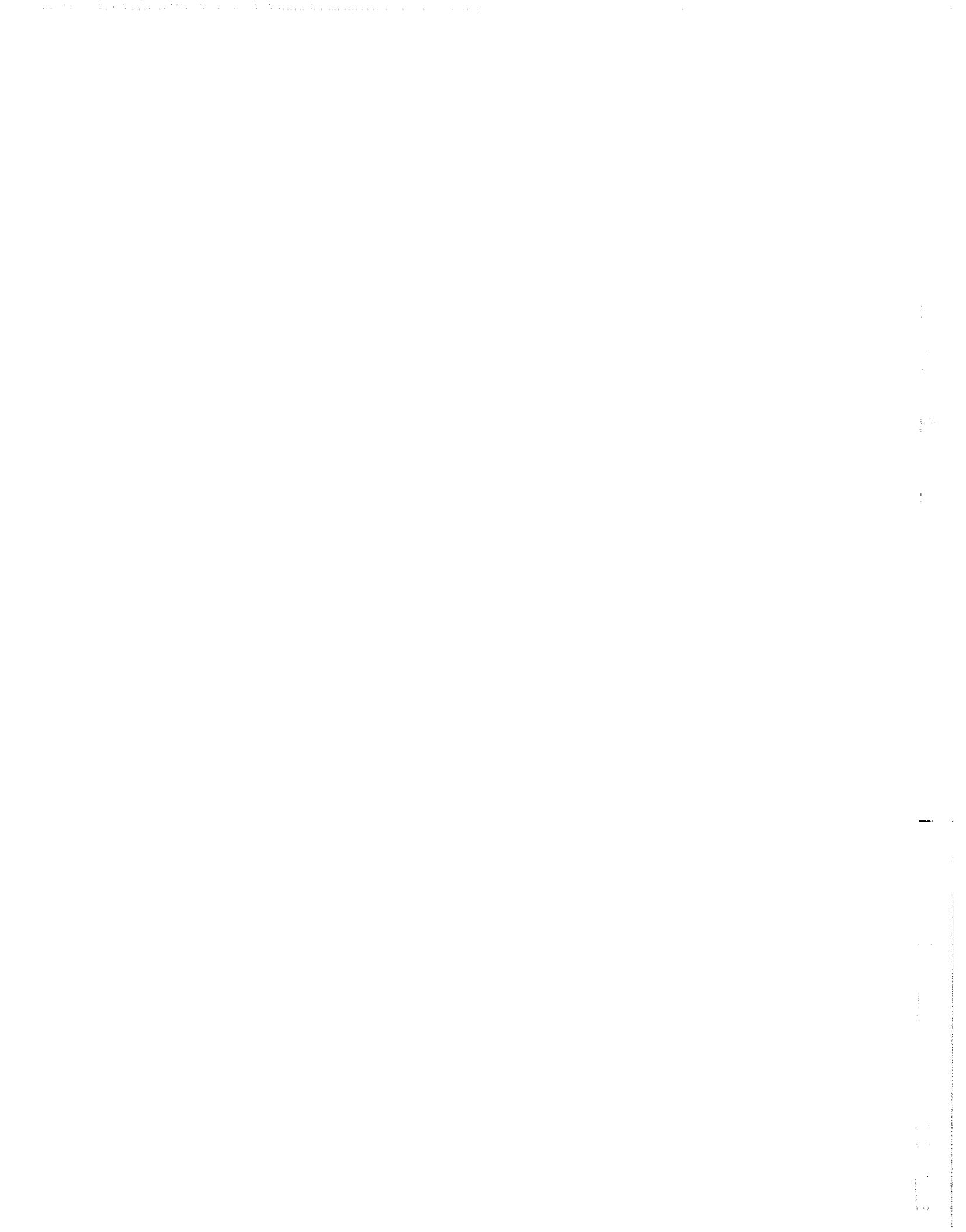
Chula Vista LCPR No. 8 Impact Matrix

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | IMPACT LEVEL | | | | | | | | | | | | | | | | | |
|----------------------------|---|--|--------------|---|---|---|---|---|------|---|---|---|---|---|------|---|---|---|---|---|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 |
| | | Building Support | X | X | X | X | X | | | | | | | | | | | | | |
| Geology/ Soils | Ground Settlement | Lagoon Berm and Roadways Support | X | X | X | X | X | | | | | | | | | | | | | |
| Groundwater | Grading | Onsite and Offsite Pipeline Improvement | X | X | X | X | X | | | | | | | | | | | | | |
| Seismic Hazards | | Ground Displacement, Liquefaction | X | X | X | X | X | | | | | | | | | | | | | |
| Groundwater Constraints | subterranean Parking Impacts | X | X | X | X | X | | | | | | | | | | | | | | |
| Flooding | Coastal Flood Hazards | X | X | X | X | X | | | | | | | | | | | | | | |
| Hydrology Water Quality | Flooding from Storm Sweetwater River | X | X | X | X | X | | | | | | | | | | | | | | |
| Erosion | Flooding from Inland Drain Overflow | X | X | X | X | X | | | | | | | | | | | | | | |
| | Erosion and Coastal Flooding | X | X | X | X | X | | | | | | | | | | | | | | |
| Urban Surface Runoff | Urban Surface Runoff | X | X | X | X | X | | | | | | | | | | | | | | |
| Water Quality | Siltation & Chemical Contamination | X | X | X | X | X | | | | | | | | | | | | | | |



Note: All impacts on Table 1-1 have been re-evaluated based upon new information provided by the applicant, and based upon a refinement of significance definitions. See Table 1-1-A for the revised table.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE |
|---|--|--|-------------|---|---|---|---|---|-------|-------------|-------------|-------------|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | [PROJ | 2 | 3 | 4 |
| Hydrology | Water Quality (cont'd) | Groundwater Extraction-Lagoon Contamination | X | X | X | | | | | X | X | |
| | | Inconsistency with Standards | | | | | | | | X | NA | NA |
| Visual Aesthetics/Community Character | Chula Vista Interpretative Center (KOP1) | 1. Visual Urban Dominance of Important Natural Setting | X | X | X | | | | | X | X | X |
| | F Street at Bay Boulevard (KOP 2) | 1. Obstruction of Bay Views | | | | | | | | X | X | X |
| | | 2. Impacts to Urban Form & Image | X | X | X | | | | | X | X | |
| | | 3. Elimination of Visual Blight | | | | | | | | X | X | X |
| Bay Boulevard Commercial Establishments (KOP 3) | 1. Obstruction of Bay Views | X | X | X | | | | | | X | X | |
| | | 2. Impacts to Urban Form & Image | X | X | X | | | | | | | |
| | | 3. Elimination of Visual Blight | | | | | | | | X | X | X |
| F Street at Woodlawn (KOP 4) | 1. Obstruction of Bay Views | | | | | | | | | X | X | X |



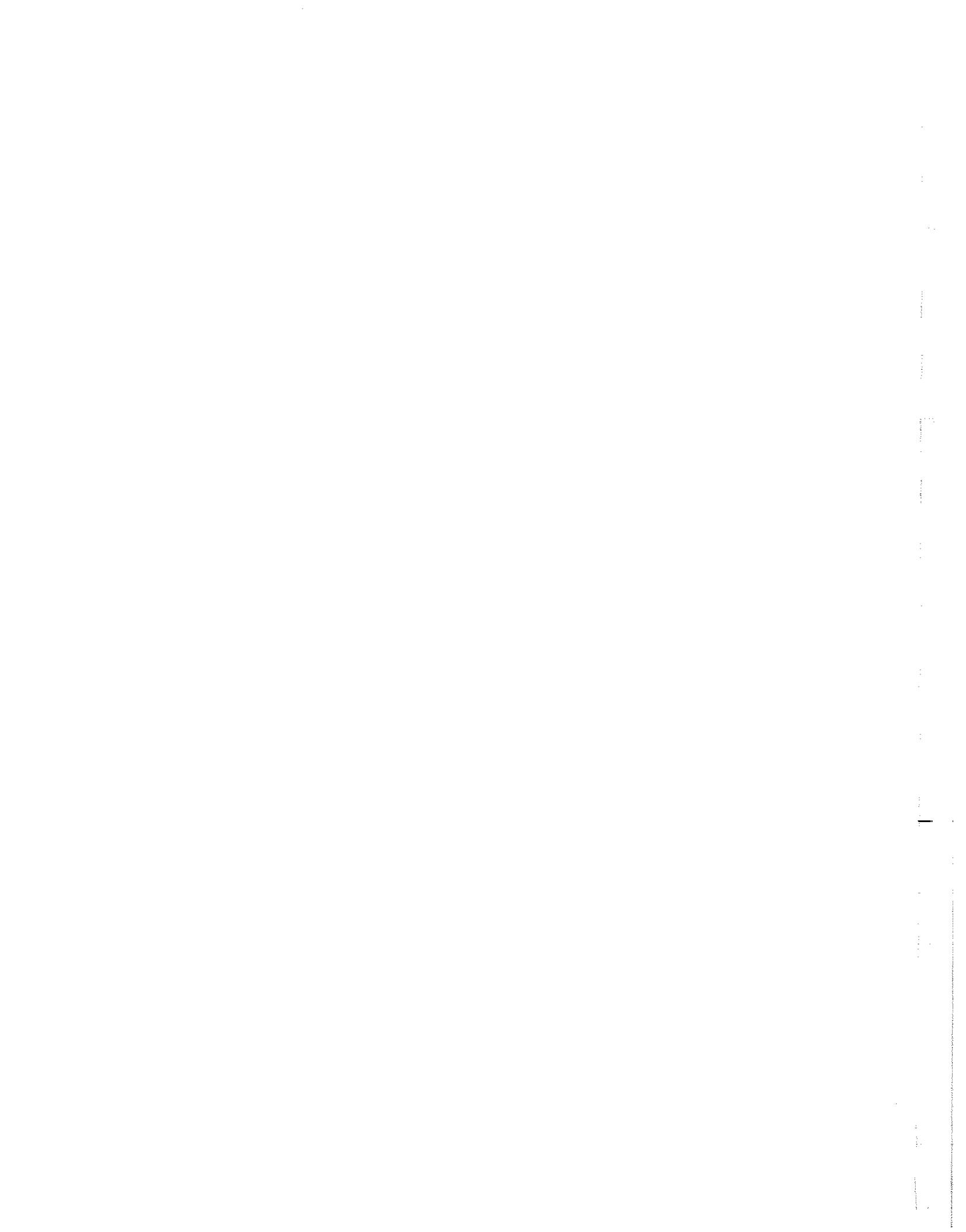
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| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | | | |
|--|--|--------------------|-------------|---|---|---|---|---|------|-------------|---|---|---|---|------|---|---|---|---|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 |
| Landform Alteration/ Visual Aesthetics (cont.) | E Street at 1-511. Obstruction of (KOP #5) Bay Views | | | | | | | | X | X | X | X | X | X | | | | | |
| | 2. Impacts to Urban Form & Image | X X X X | | | | | | | | | | | | | X | X | X | X | X |
| | 3. Elimination of Visual Blight | | | | | | | | | | | | | | X | X | X | X | X |
| 1-5 (KOP #6) | 1. Obstruction of Bay Views | | | | | | | | X | X | X | X | X | X | | | | | |
| | 2. Impacts to Urban Form & Image | X X X X | | | | | | | | | | | | | X | X | X | X | X |
| Marina Parkway (KOP #7) | 1. Creation of Scenic Bay Views | | | | | | | | | | | | | | X | X | X | X | X |
| | 2. Elimination of Visual Blight | | | | | | | | | | | | | | X | X | X | X | X |
| Elevated View From Extended | 1. Creation of Stay Hotel (KOP #8) | | | | | | | | | | | | | | X | X | X | X | X |
| Marina Parkway South & Community Park | 1. Creation of Scenic Bay Views 2. Elimination of (KOP #9) Visual Blight | | | | | | | | | | | | | | X | X | X | X | X |
| Conversion of Agricultural Lands | Agricultural Lands | | | | | | | | | | | | | | X | X | X | X | X |



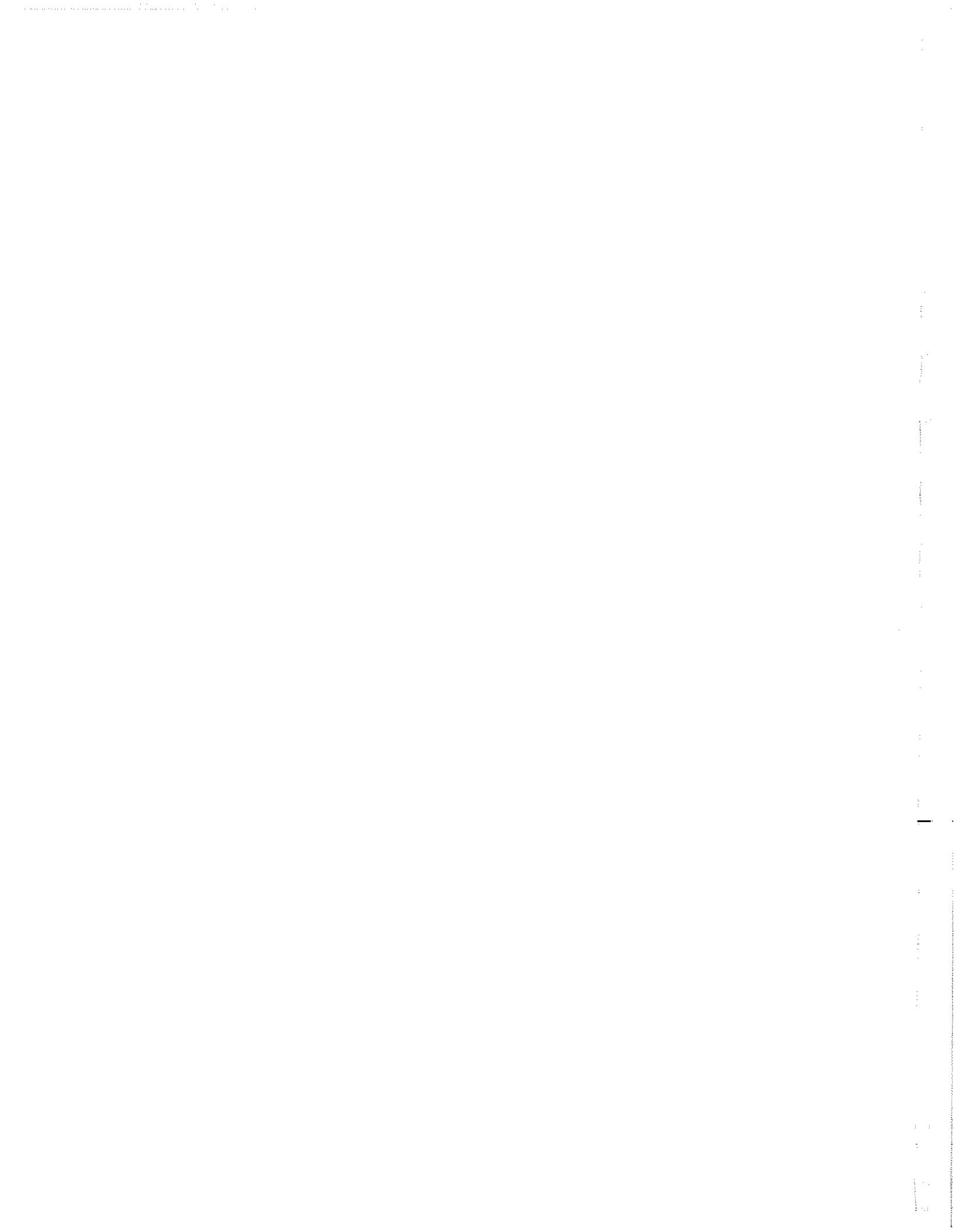
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| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE |
|---------|--------------------------------|---|-------------|---|---|---|---|---|------|-------------|-------------|-------------|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 |
| Biology | Drainage & Water Quality | Increased Freshwater Input | | | | | | | | | | |
| | Contaminant Discharge | | X | X | X | X | X | | | | | |
| | Sediment Accretion and Erosion | | | X | X | X | X | X | | | | |
| | Construction Impacts | | | X | X | X | X | X | | | | |
| | Wildlife Resources | Avian Flight Patterns | | | | | | | X | X | X | X |
| | | Human/Pet Presence | | | | | | | X | X | X | X |
| | | Alteration of Prey/Comp/Prey Regimes | | | | | | | | | | |
| | | 1. Changes in Land Use | X | X | X | X | X | | | | | |
| | | 2. Avian Predator Enhancement | | X | X | X | X | X | | | | |
| | | Alteration of Habitat Use Areas | | | | | | | | | | |
| | | 1. Incremental Loss Raptor Foraging Areas | X | X | X | X | X | | | | | |
| | | 2. Creation Sheltered Pond Habitat | | | | | | | X | MA | X | X |



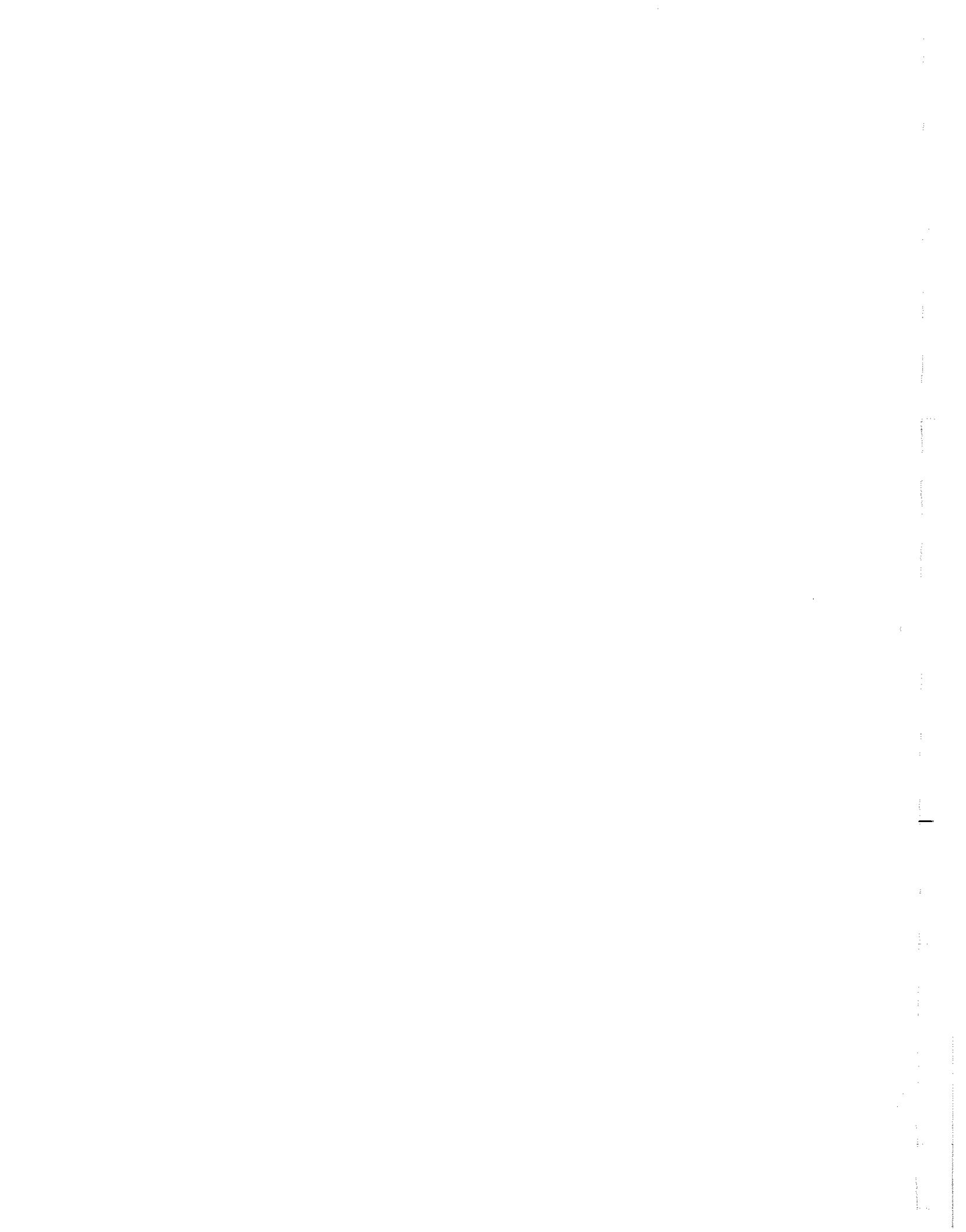
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| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | | | | |
|--------------------|---------------------------------------|-------------------------------|-------------|---|---|---|---|---|------|-------------|---|---|---|---|------|---|-------------|---|---|---|------|---|---|---|---|---|---|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | |
| Biology (cont.) | Threatened & Endangered Species | Effects of Habitat Shading | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | - Salt Marsh Bird's Beak | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | - California Brown Pelican | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | - California Least Tern | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | - Light-footed Clapper Rail | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | - Peregrine Falcon | | | | | | | | | | | | | | | | X | | | | | | X | X | X | X | X |
| | - Belding's Savannah Sparrow | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | Construction Impacts | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | Eelgrass | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | Marine Resources | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |
| | Construction Impacts | | | | | | | | | | | | | | | | X | X | X | X | X | | | | | | |



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| ISSUE | SUB ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | | | |
|---|--|---|-------------|---|---|---|---|---|------|-------------|---|---|---|---|------|---|-------------|---|---|---|------|---|---|---|---|---|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 |
| Air Quality | Co-Generation Plant Emissions | NOx, ROG, CO Emissions | | | | | | | X | X | X | | | | | | | | | | | | | | | |
| | Vehicular Emissions | Incremental Contribution to Air Basin Impacts | | | | | | | X | X | X | X | | | | | | | | | | | | | | |
| Archaeology/ History/ Paleontology | Archaeology/ History | Impacts to Historic/ Prehistoric Objects | | | | | | | | | | | | | X | X | X | X | X | | | | | | | |
| | Paleontology | Impacts to Fossils | | | | | | | X | X | X | X | | | | | | | | | | | | | | |
| Land Use/ General Plan Elements/ Zoning | Land Use | Compatibility with Surrounding Area Land Uses | | | | | | | | | | | | | X | X | X | | | | | | | | | |
| | Zoning | Compatibility Between Internal Land Uses | | | | | | | | | | | | | | | | | | | | | | | | |
| | a. (with refuge) | | X | X | X | | | | | | | | | | | | | | | | | | | | | |
| | b. (on-site residents) | | | | | | | | X | X | X | X | | | | | | | | | | | | | | |
| | a. General Plan Update, Bayfront Elements/Zoning | | | | | | | | | | | | | | | | | | | | | | | | | |
| | LCP, Bayfront Redevelopment Plan | | | | | | | | | | | | | | | | | | | | | | | | | |
| | b. UPD, National City Plans | | | | | | | | | | | | | | X | X | X | X | X | | | | | | | |



Note. All impacts on Table 1-1 have been re-evaluated based upon new information provided by the applicant, and based upon a refinement of significance definitions. See Table 1-1-A for the revised table.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | | | | |
|--------------------------------|-----------------------------------|--|--|---|---|---|---|---|------|-------------|----|----|----|----|----------------------------|---|---|---|---|---|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | |
| Community Social Factors | Population/ Housing, Employment | a. Increase Over Expected Population/Housing b. Increase Over Expected Employment | | | | | | | | x | x | x | x | x | x | x | x | x | x | |
| Community Tax Structure | Parks, Recreation, Open Space | Parkland and Recreation, Open Space | Inadequacy Phasing Plan re: Parks, Parking | | | | | | | x | NA | NA | NA | NA | | x | x | x | x | x |
| | | Parkland and Recreation, Open Space | Adequacy of Parkland Provided | | | | | | | | | | | | | | | | | |
| | | | a. On-site Reqs. | | | | | | | x | x | x | x | x | | | | | | |
| | | | b. Regional Demand | | | | | | | x | x | x | x | x | (incremental contribution) | | | | | |
| | | | Public Access Information | | | | | | | x | x | x | x | x | | | | | | |
| | | | Shade/Shadow | | | | | | | x | | | | | | x | x | | | |
| Gas & Electric Utility Service | Ability to Provide Service | Ability to Provide Service | | | | | | | | x | x | x | x | x | | | | | | |
| | Fire & Police Ability to Provide: | | | | | | | | | | | | | | | | | | | |
| | a. Fire Protection | | | | | | | | | x | x | x | x | x | | | | | | |
| | b. Police Protection | | | | | | | | | | | | | | | x | x | x | x | x |



Note: All impacts on Table 1-1 have been re-evaluated based upon new information provided by the applicant, and based upon a refinement of significance definitions. See Table 1-1-A for the revised table.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | ALTERNATIVE | | | | | | | | | |
|--------------------------|--|--|-------------|---|---|---|---|---|------|-------------|---|---|---|---|------------------|---|-------------|----|---|---|------|---|---|---|---|---|
| | | | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 | PROJ | 2 | 3 | 4 | 5 | 7 |
| Utility Service (cont'd) | Solid Waste | Ability to Provide Service | | | | | | | | X | X | X | X | X | | | | | | | | | | | | |
| | Sewer | Ability to Provide Service | | | | | | | | X | X | X | X | X | | | | | | | | | | | | |
| | Water | Ability to Provide Service | | | | | | | | X | X | X | X | X | | | | | | | | | | | | |
| | | Lack of info re: Water Supply for Lagoon | | | | | | | | X | X | X | X | X | | | | | | | | | | | | |
| | Schools | Ability to Accommodate Students | | | | | | | | X | X | X | X | X | | | | | | | | | | | | |
| | | Cost to Transport Students to Existing or New Schools across I-5 | | | | | | | X | X | X | X | X | | | | | | | | | | | | | |
| | Transportation/Circulation at Access Intersections & Street Capacity | Level of Service | | | | | | | | X | X | X | X | X | | | | | | | | | | | | |
| | Noise | Land Use Compatibility | | | | | | | | | | | | | Childcare Center | | X | NA | X | X | NA | | | | | |
| | Air Quality | | | | | | | | | | | | | | | | | | | | | X | X | X | X | X |



Table 1-1-A
Revised Impact Matrix — Chula Vista LCPR No. 8

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | IMPACT LEVEL | | | | | |
|----------------------------------|----------------------------|---|-------------------------------|----------------------------|---------------------------|-----------------|-----------------------------|-------------------------|
| | | | SIGNIFICANT, NOT MITIGABLE | MITIGATED AT PLAN LEVEL | SIGNIFICANT, MITIGABLE | NOT SIGNIFICANT | ADVERSE, NOT SIGNIFICANT | NO OR LIMITED IMPACT |
| Geology/ Soils Groundwater | Ground | Building Support | | | | X | X X X X X X | X |
| | Settlement | Lagoon Berm and Roadways Support | | | | X X X X X X X | | |
| | Grading | Onsite and Offsite Pipeline Improvement | | | | X X X X X X X | | |
| | Seismic Hazards | Ground Displacement, Liquefaction | | | | X X X X X X X | | |
| | Groundwater Constraints | Subterranean Parking Impacts | | | | X X X X X X | | X |
| | Flooding | Coastal Flood Hazards | | | | X X X X X X | | |
| | | Flooding from Sweetwater River | | | | X X X X X X X | | |
| | | Flooding from Storm Drain Overflow | | | | X X X X X X X | | |
| | Erosion | Erosion from Inland and Coastal Flooding | | | | X X X X X X X | | |
| | Water Quality | Urban Surface Runoff Siltation & Chemical Contamination | | | | X X X X X X X | | |

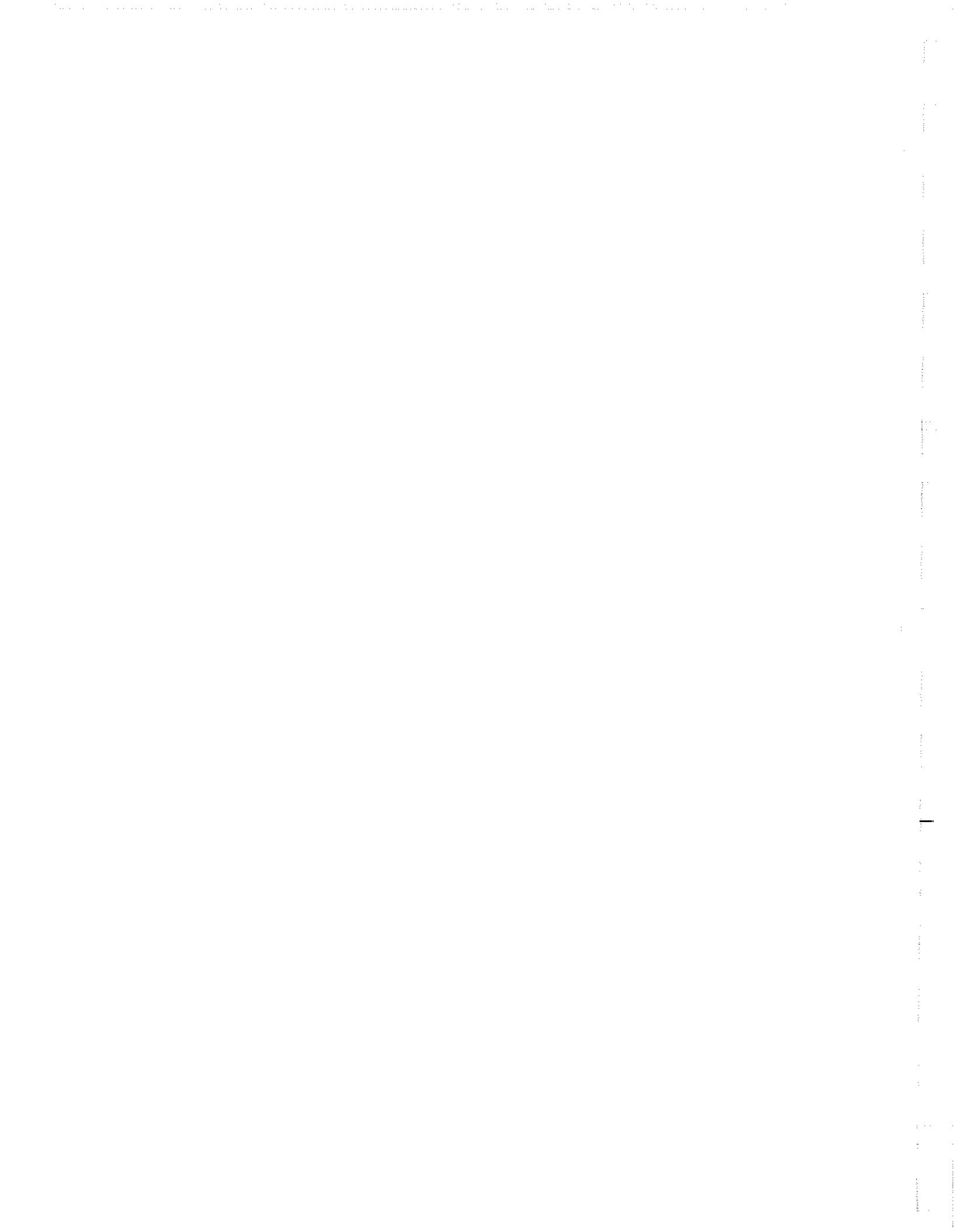


Table 1-1-A, cont.

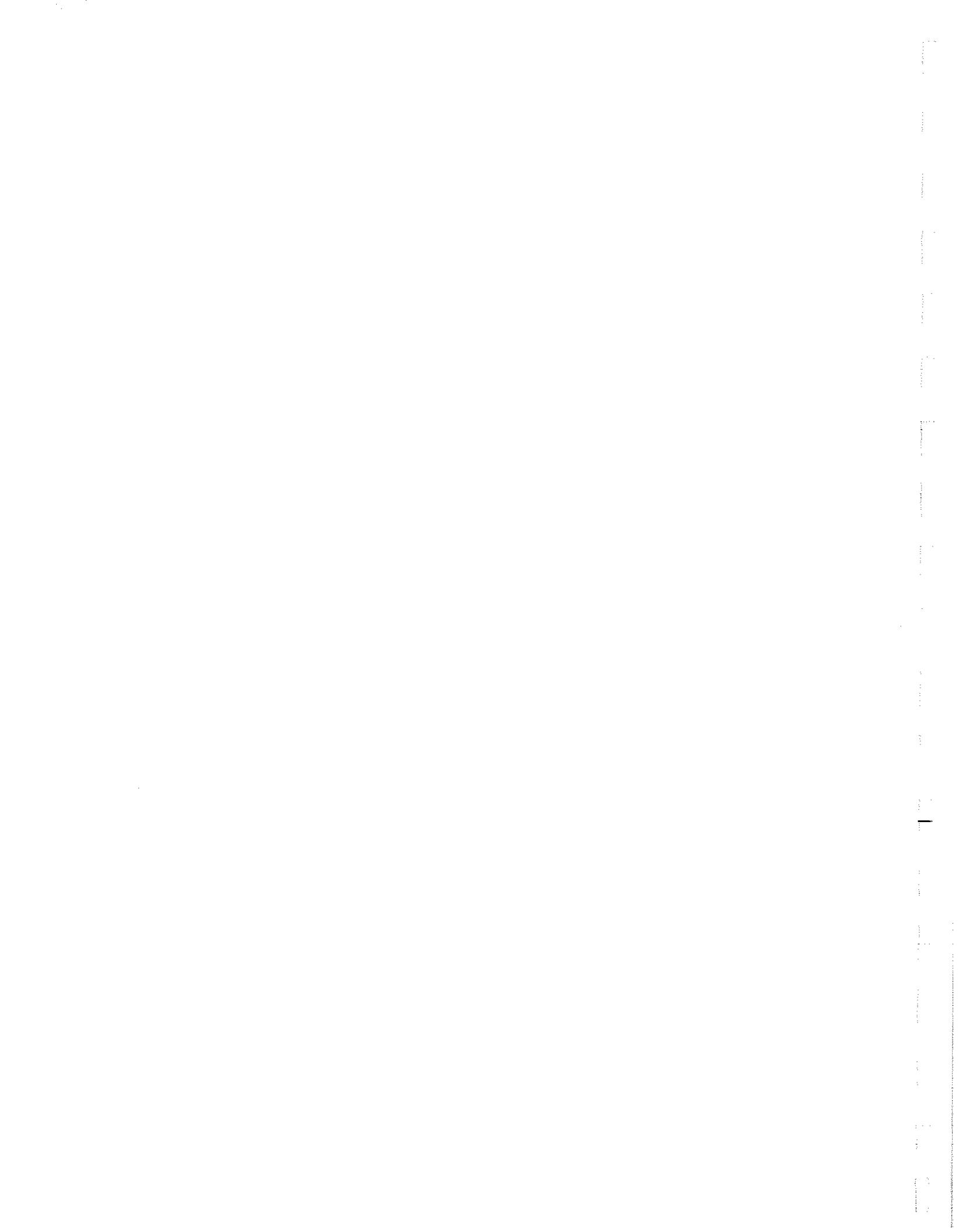


Table 1-1-A, cont.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | IMPACT LEVEL | | | | | | | | |
|---|-------------------------------------|--------------------|--|-------------|-------------|---------------------------|-------------|-------------|-----------------------------|-------------|-------------|
| | | | SIGNIFICANT, NOT MITIGATED AT PLAN LEVEL | | | SIGNIFICANT, MITIGABLE | | | ADVERSE, NOT SIGNIFICANT | | |
| | | | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE |
| F Street at Woodlawn (KOP 4) | Visual Blight | | | | | | | | | X XXXXXXXX | |
| E Street at I-5 (KOP #5) | 1. Obstruction of Bay Views | | | | | | | | | X XXXXXXXX | |
| | 2. Impacts to Urban Form & Image | | | | | | | | | X XXXXXXXX | |
| | 3. Elimination of Visual Blight | | | | | | | | | X XXXXXXXX | |
| I-5 (KOP #6) | 1. Obstruction of Bay Views | | | | | | | | | X XXXXXXXX | |
| | 2. Impacts to Urban Form & Image | | | | | | | | | X XXXXXXXX | |
| Marina Parkway (KOP #7) | 1. Creation of Scenic Bay Views | | | | | | | | | X XXXXXXXX | |
| | 2. Elimination of Visual Blight | | | | | | | | | X XXXXXXXX | |
| Elevated View From Hotel (KOP #8) | 1. Creation of Scenic Bay Views | | | | | | | | | X XXXXXXXX | |

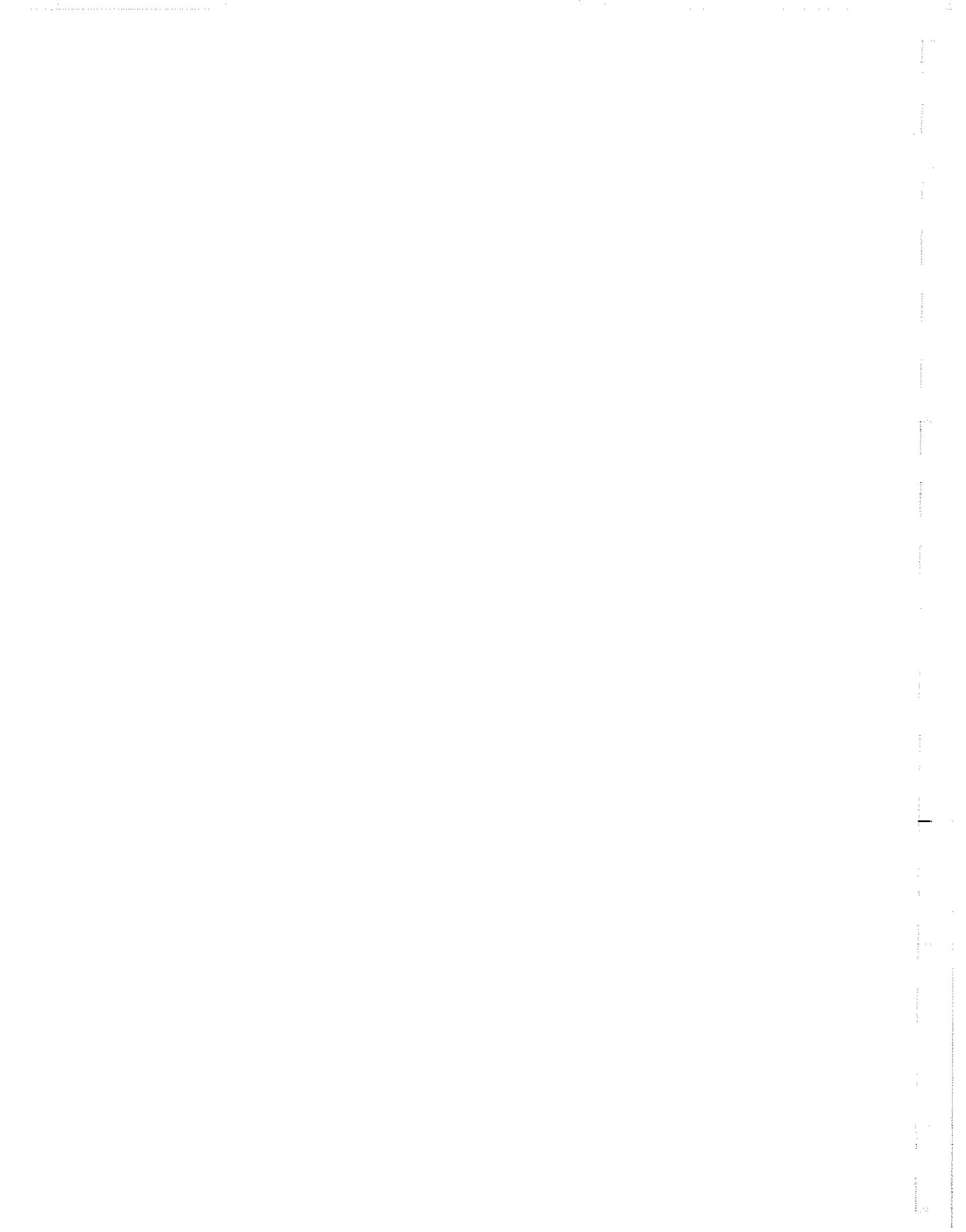


Table 1-1-A, cont.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | SIGNIFICANT, NOT SIGNIFICANT, NOT MITIGATED AT PLAN LEVEL | SIGNIFICANT, MITIGATED AT PLAN LEVEL | ADVERSE, NOT SIGNIFICANT | NO OR LIMITED IMPACT | BENEFICIAL IMPACT |
|---|--|--------------------|--|--|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | ALTERNATIVE [PROJ 2 3 4 5 7 8 9] | ALTERNATIVE [PROJ 2 3 4 5 7 8 9] | ALTERNATIVE [PROJ 2 3 4 5 7 8 9] | ALTERNATIVE [PROJ 2 3 4 5 7 8 9] | ALTERNATIVE [PROJ 2 3 4 5 7 8 9] |
| Marina Parkway South & Community Park (KOP #9) | 1. Creation of Scenic Bay Views | | | | | | |
| Conversion of Agricultural Lands | 2. Elimination of Visual Blight | | | | | | |
| Agricultural Lands | Loss of Potential Agricultural Lands | | | | | | |
| Biology | Increased Freshwater Input Water Quality | | | | | | |
| | Contaminant Discharge | X XXXXXXXX | | | | | |
| | Sediment Accretion and Erosion | | X XXXXXX | | | | |
| | Construction Impacts | | | X XXXXXX | | | |
| Wildlife Resources | Avian Flight Patterns | | | | X XXXXXX | | |
| | Human/Pet Presence | X XXXXXX | | | | | |
| | Alteration of Pred/ | | | | | | |

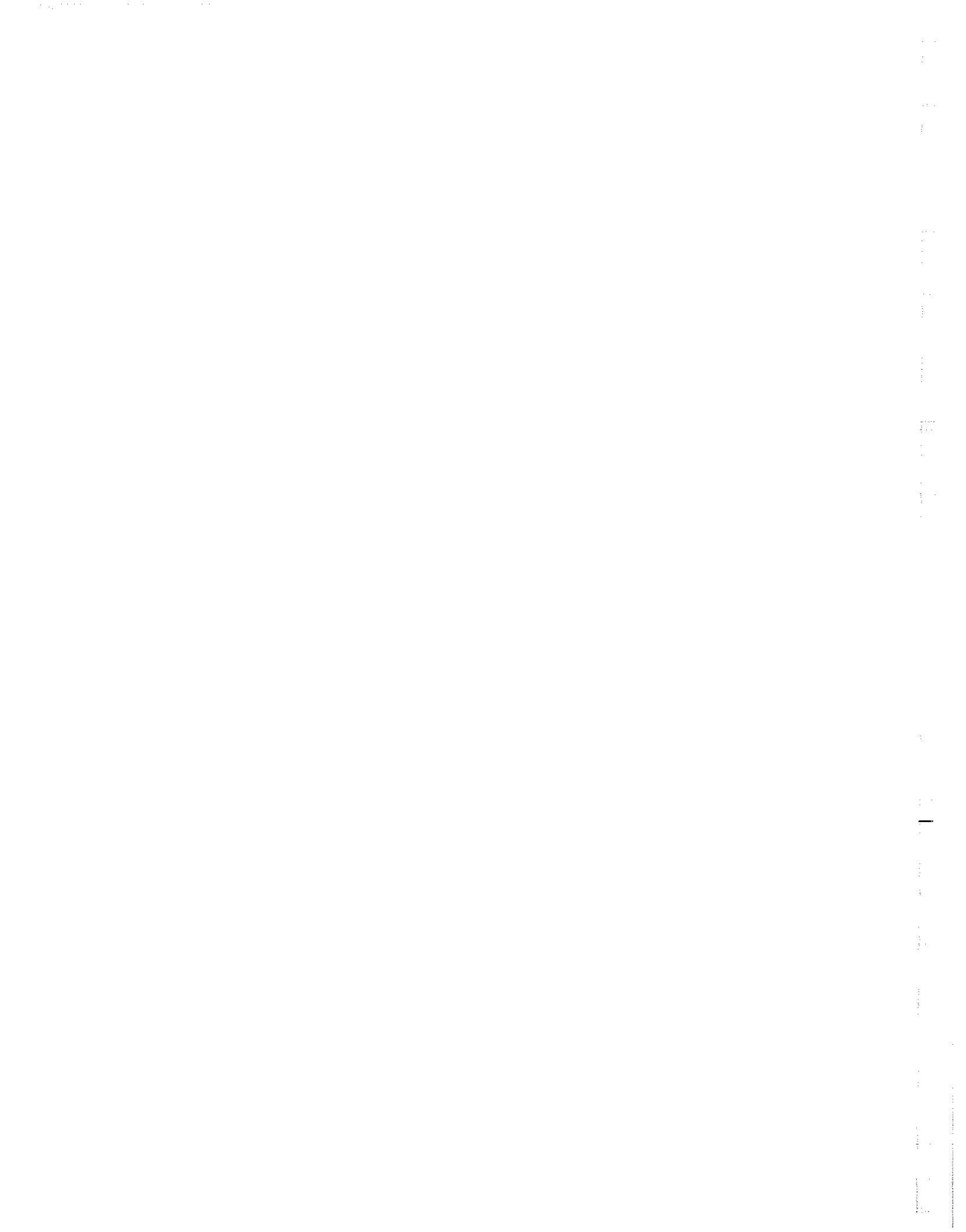


Table 1-1-A, cont.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | IMPACT LEVEL | | | | | | | | |
|-------|---|--------------------|----------------------------------|----------------------------|---------------------------|--------------------|-----------------------------|--------------------|--------------------|--------------------|----------------------|
| | | | SIGNIFICANT, NOT MITIGABLE | MITIGATED AT PLAN LEVEL | SIGNIFICANT, MITIGABLE | NOT SIGNIFICANT | ADVERSE, NOT SIGNIFICANT | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | BENEFICIAL IMPACT |
| | | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 |
| | Comp/Prey Regimes | | | | | | | | | | |
| | 1. Changes in Land Use | | | X X X X X X X | | | | | | | |
| | 2. Predator | | | X X X X X X X | | | | | | | |
| | a. On-site Requirs. | | | | | X X X X X X X X | | | | | |
| | Alteration of Habitat Use Areas | | | | | | | | | | |
| | 1. Incremental Loss Raptor Foraging Areas | | X X X X X X X | | | | | | | | |
| | 2. Creation Sheltered Pond Habitat | | | | | | | X | | X X X X X X | |
| | Lighting Impacts | | | | | X X X X X X X X | | | | | |
| | Vector Control | | | | X X X X X X X | | | | | X X X X X X | |
| | Effects of Habitat Shading | | | | | | | | X X X X X X | | |
| | - Salt Marsh Bird's Beak | | | | | | | | | X X X X X X X | |
| | - California Brown Pelican | | | | | | | | | X X X X X X X | |

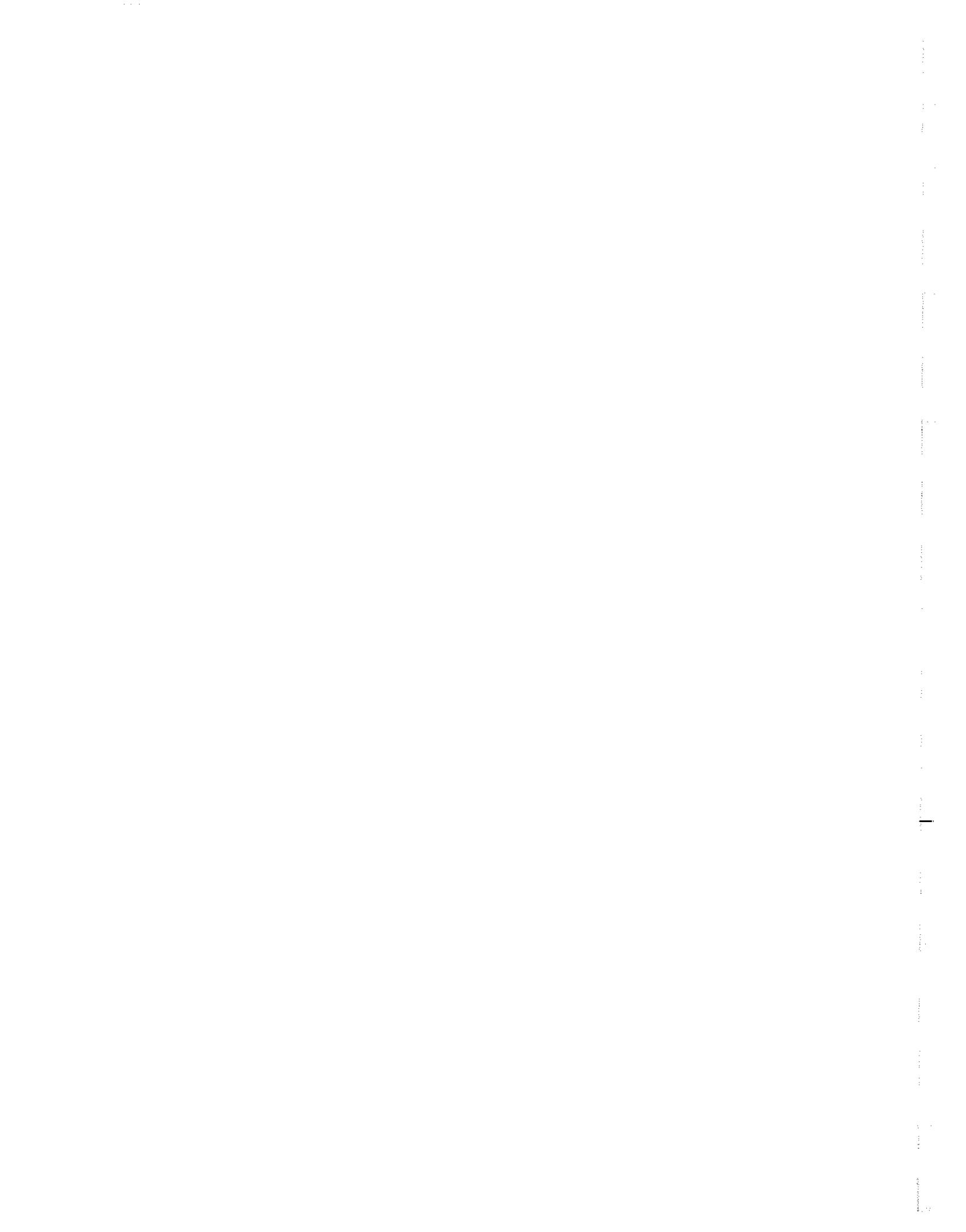


Table 1-1-A, cont.

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | IMPACT LEVEL | | | | | | | | |
|------------------------------|-------------------------------|---|-------------------------------|----------------------------|---------------------------|-----------------------------|--------------------|--------------------|--------------------|-------------------------|----------------------|
| | | | SIGNIFICANT, NOT MITIGABLE | MITIGATED AT PLAN LEVEL | SIGNIFICANT, MITIGABLE | ADVERSE, NOT SIGNIFICANT | ALTERNATIVE | ALTERNATIVE | ALTERNATIVE | NO OR LIMITED IMPACT | BENEFICIAL IMPACT |
| | | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 |
| - California Least Tern | | | | | X XXXXXX | | | | | | |
| - Light-footed Clapper Rail | | | | X XXXXXX | | | | | | | |
| - Peregrine Falcon | | | | | | | | X XXXXXX | | | |
| - Belding's Savannah Sparrow | | | | X XXXXXX | | | | | | | |
| Construction Impacts | | | | | | X XXXXXX | | | | | |
| Marine Resources | Eelgrass | | | | | | X XXXXXX | | | | |
| | Mudflats | | | | | | | X XXXXXX | | | |
| | Construction Impacts | | | | | | | X XXXXXX | | | |
| Air Quality | Co-Generation Plant Emissions | | | | | | | | X XXXX | | |
| | NOx, ROG, CO Emissions | | | | | | | | | X X X | |
| | Vehicular Emissions | Incremental Contribution to Air Basin Impacts | | | | | | | | X X X X X | |
| Archaeology/ History/ | Archaeology/ History/ | Impacts to Historic/ Prehistoric Objects | | | X XXXXXX | | | | | | |

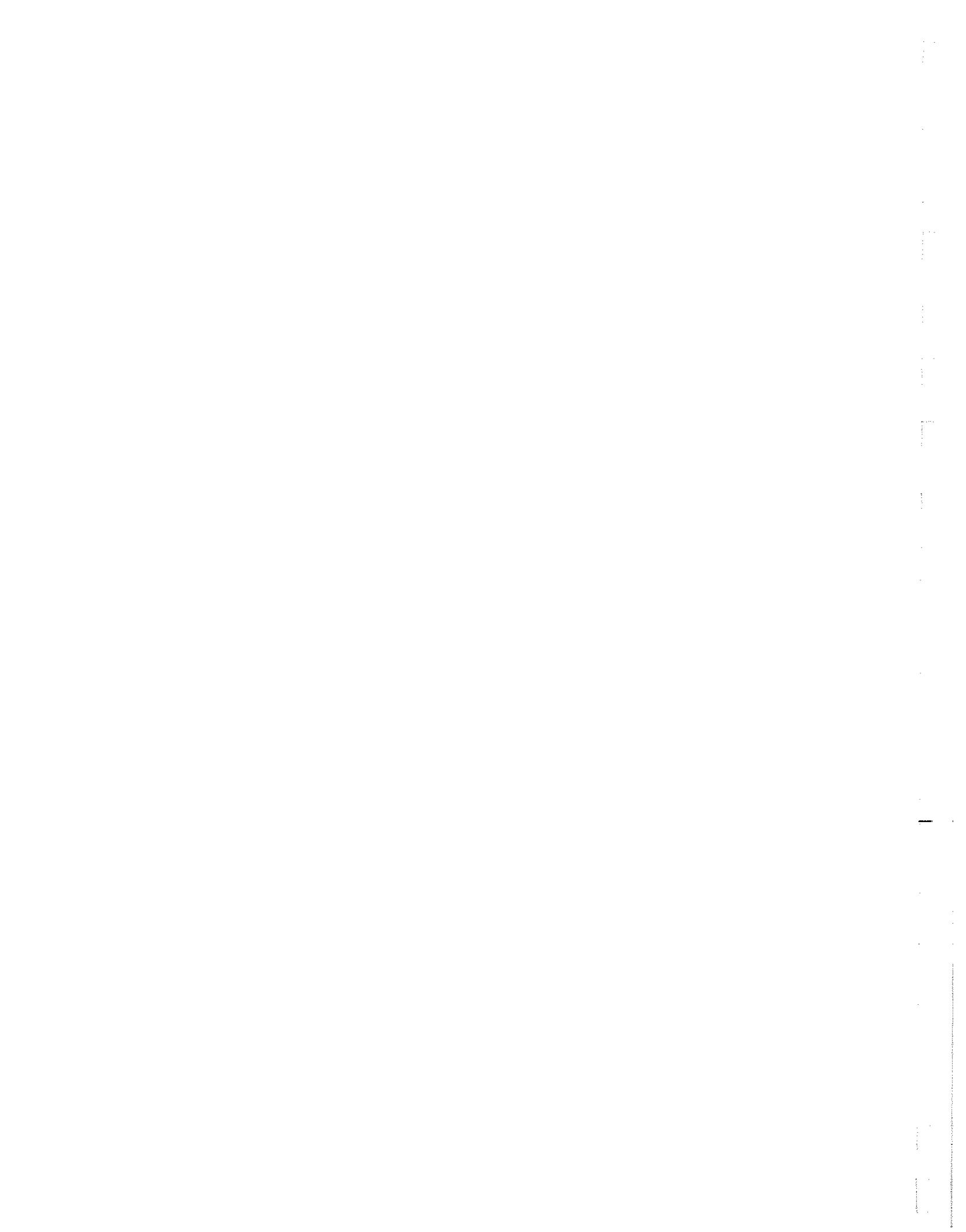


Table 1-1-A, cont.

IMPACT LEVEL

| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | IMPACT LEVEL | | | | | | | | |
|--|---|---|----------------------------|-------------------------|------------------------|-----------------|-----------------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|
| | | | SIGNIFICANT, NOT MITIGABLE | MITIGATED AT PLAN LEVEL | SIGNIFICANT, MITIGABLE | NOT SIGNIFICANT | ADVERSE, PROJ 2 3 4 5 7 8 9 | ALTERNATIVE, PROJ 2 3 4 5 7 8 9 | ALTERNATIVE, PROJ 2 3 4 5 7 8 9 | ALTERNATIVE, PROJ 2 3 4 5 7 8 9 | BENEFICIAL, PROJ 2 3 4 5 7 8 9 |
| Paleontology | Paleontology | Impacts to Fossils | | | | | X X X X X X X | | | | |
| Land Use/ General Plan Elements/ Zoning | Land Use | Compatibility with Surrounding Area Land Uses | X | X X X | X | | | | X X X | X X X | |
| | | Compatibility Between Internal Land Uses | | | | | | | X X X | X X X | |
| | a. (with refuge) | X X X X X | | | | | | | X X X | X X X | |
| | b. (on-site residents) | | | | | | X X X X X | | X X X | X X X | |
| | a. General Plan Elements/Zoning | | | | | | X X X X X X | X | | | |
| | b. UPD, National City Plans | | | | | | | | X X X X X X X | | |
| Community Social Factors | a. Increase Over Expected Popula- tion/Housing, Employment | | | | | | | | X X X X X X X | X X X X X X X | |

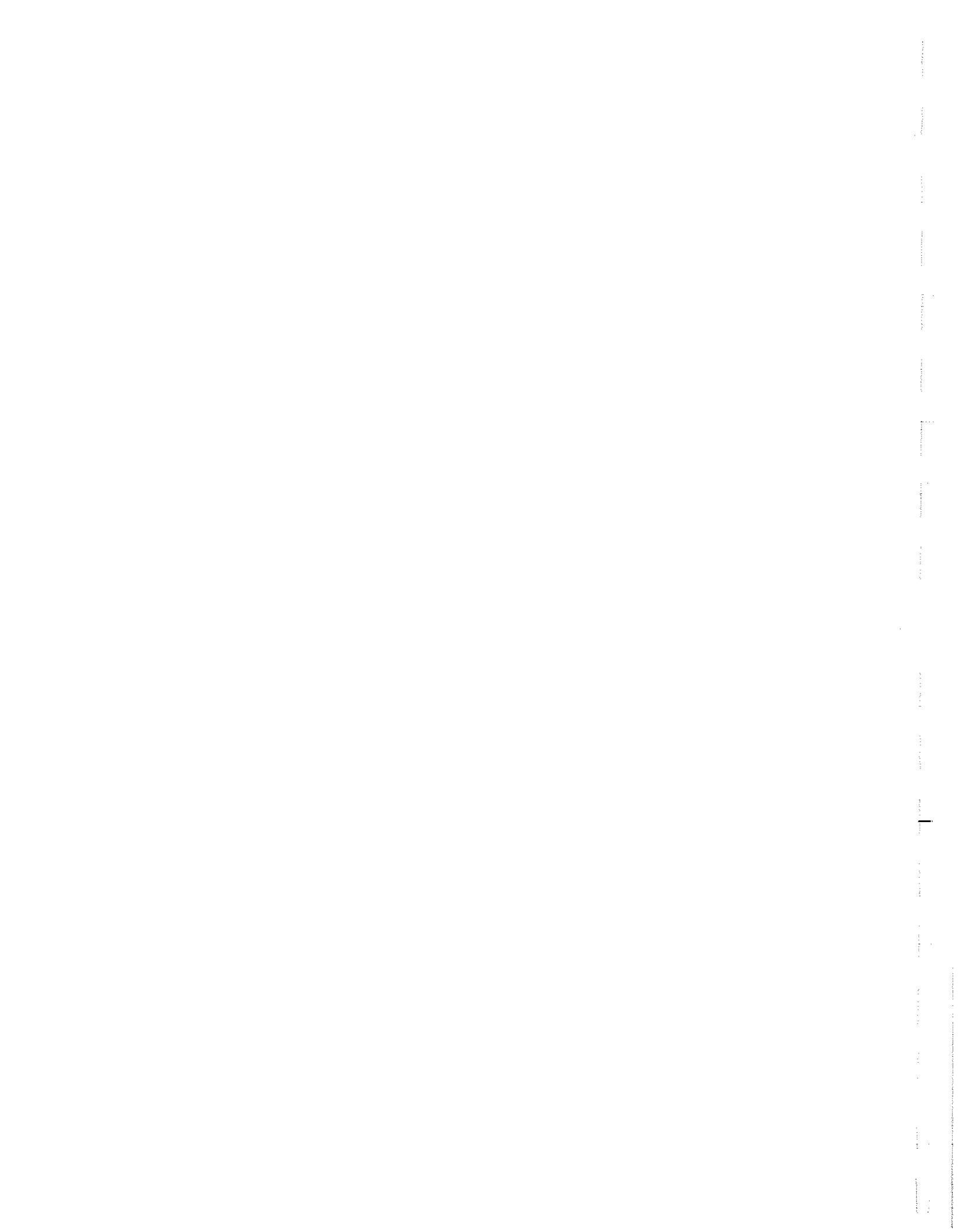


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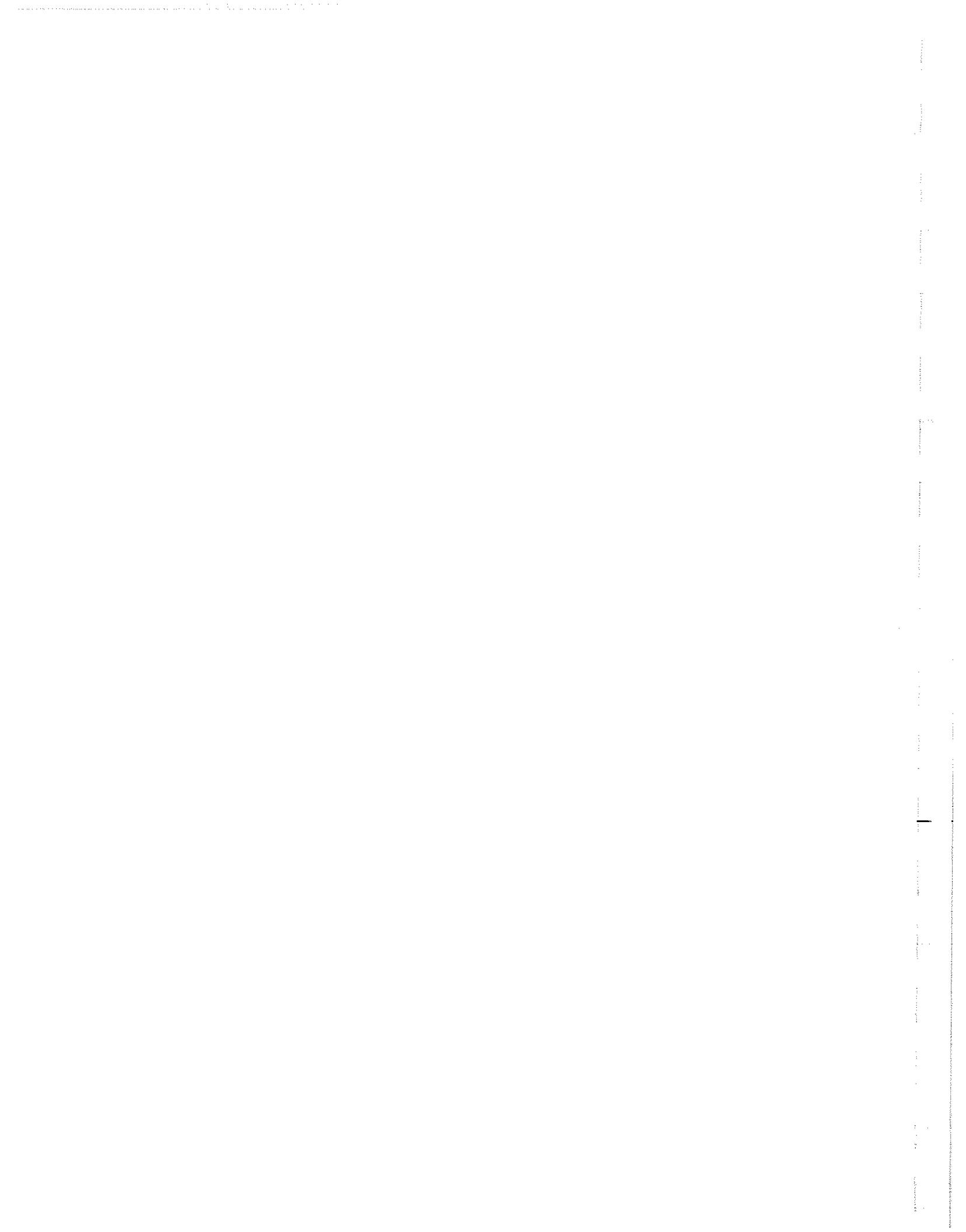


Table 1-1-A, cont.

| IMPACT LEVEL | | | | | | | | | |
|---|------------------------------------|-------------------------------|----------------------------|---------------------------|--------------------|-----------------------|---|----------------------|-------------|
| | | SIGNIFICANT, NOT MITIGABLE | MITIGATED AT PLAN LEVEL | SIGNIFICANT, MITIGABLE | NOT SIGNIFICANT | ADVERSE, MITIGABLE | NO OR LIMITED IMPACT | BENEFICIAL IMPACT | |
| ISSUE | SUB-ISSUE | IMPACT DESCRIPTION | | | | | | | |
| | | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | PROJ 2 3 4 5 7 8 9 | ALTERNATIVE |
| | a. Fire Protection | | | X X X X X X X | | | | | |
| | b. Police Protection | | | | | | | | |
| Solid Waste | Impacts on Landfill Capacity | | | X XXXXXXXX | | | | | |
| Sewer | Ability to Provide Service | | | | X X X X X X X | | | | |
| Water | Ability to Provide Service | | | | | X X X X X X X | | | |
| | Water Supply for Project | | | | | | X X X X X X X (incremental contribution) | | |
| | Water Supply for Lagoon | | | | | | X XXXXXX | | |
| Schools | Ability to Accommodate Students | | | | | | | X X X X X X X | |
| Transportation/Circulation at Access | Level of Service Intersections | X | | | | | | | |
| | & Street Capacity | | | | | | | | |
| Noise | Land Use Compatibility | Childcare Center | | | | | | X # X X # X # | |

- Contributes to regionally significant cumulative impacts

Not Applicable

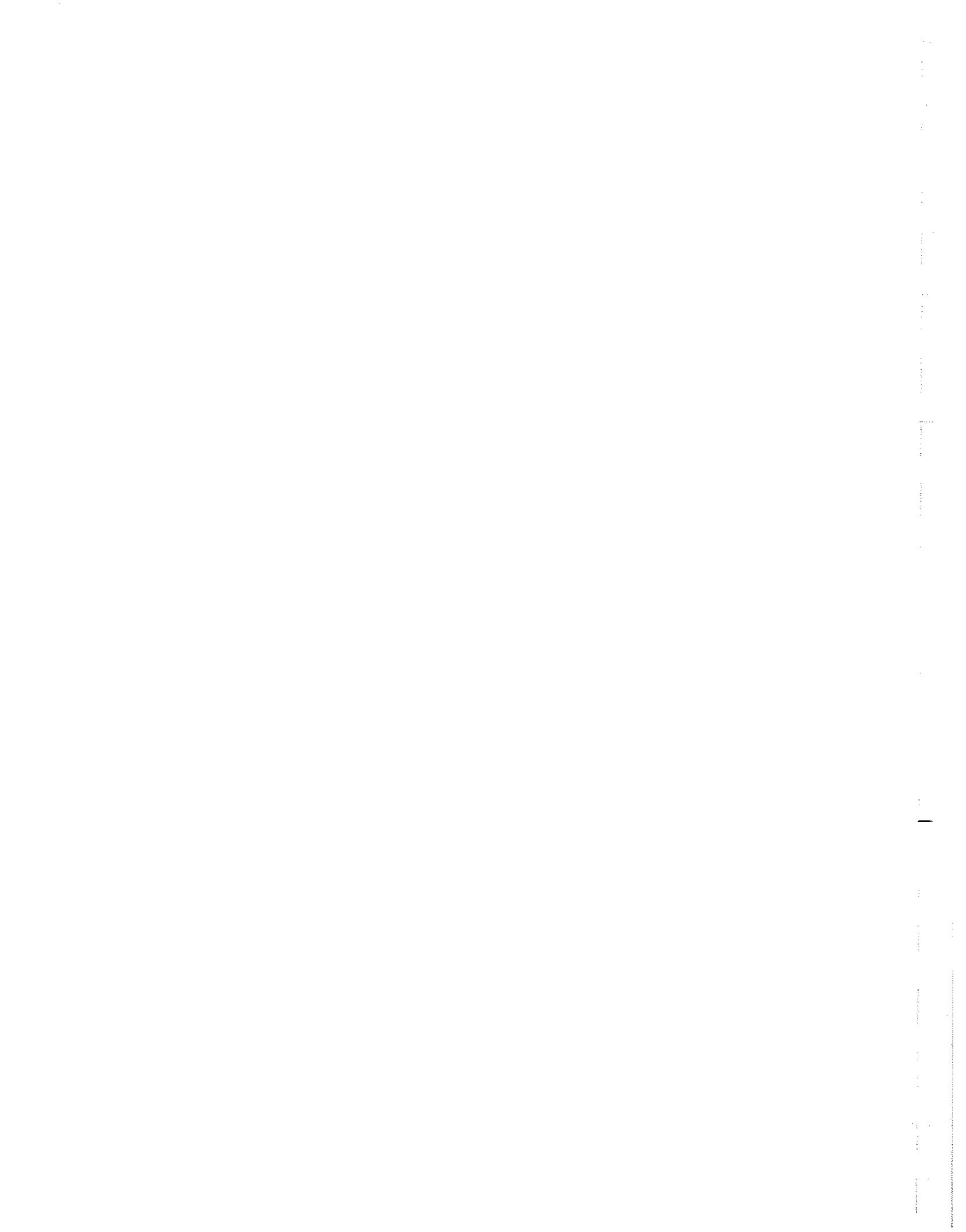
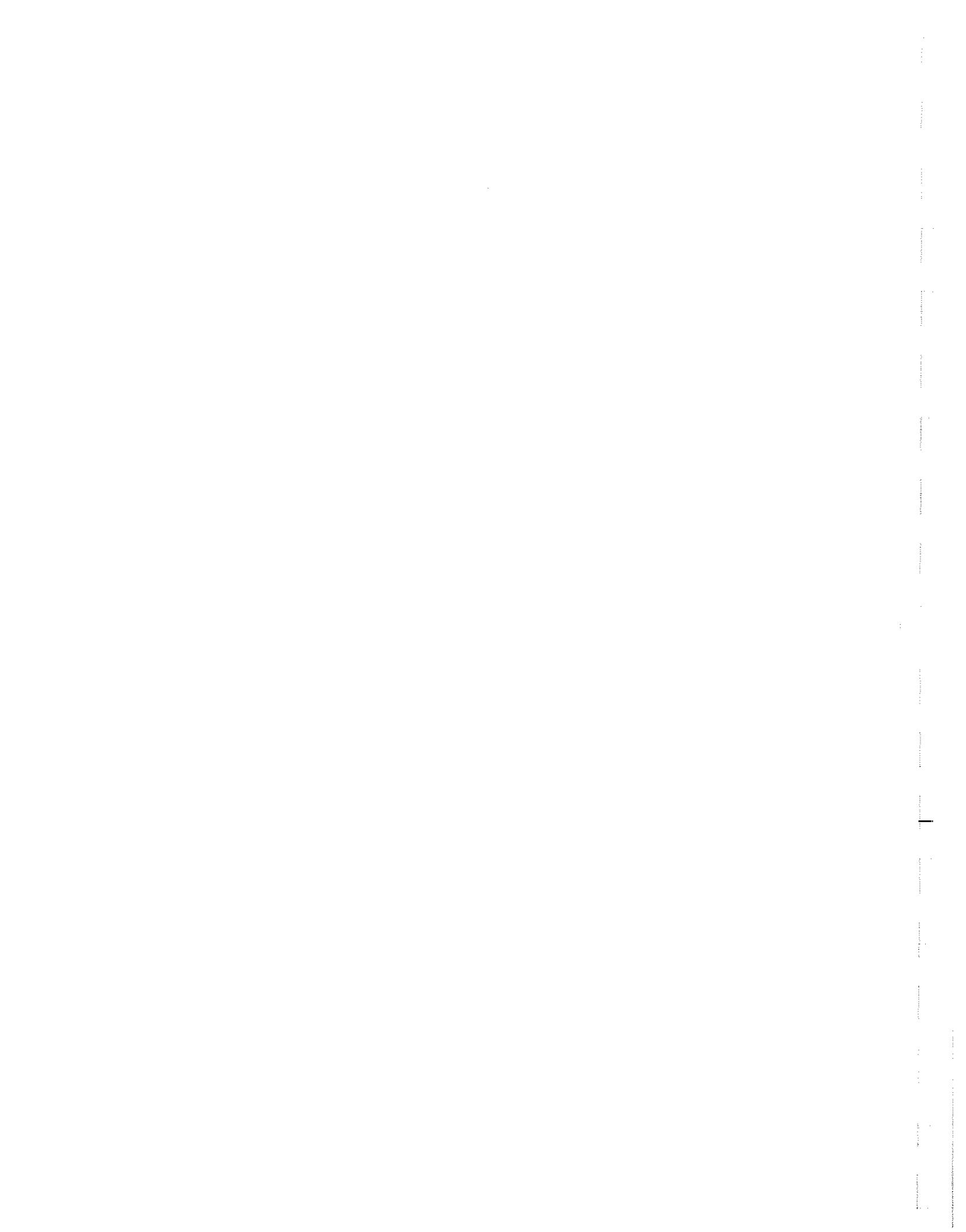


Table 1-2
Chula Vista LCPR No. 8 Mitigation Measures

| <u>ISSUE</u> | <u>FEASIBLE MITIGATION MEASURES</u> | <u>IMPACTS MITIGATED BY THIS MEASURE</u> |
|---------------------------|---|--|
| Geology/Soils/Groundwater | <p>When detailed development plans for the project area are proposed, a detailed grading and drainage plan must be prepared in accordance with the Chula Vista Code, Subdivision Manual, and City ordinances and adopted standards. This plan must include not only grading for structures and roads, but also grading for on-site and off-site water and sewer pipelines. This plan must be approved and a permit issued by the Engineering Department prior to any grading work.</p> <p>A site-specific geotechnical engineering investigation, including soils study and seismic study, should be performed for each proposed structure as a condition for issuance of building permits. Each investigation should contain adequate subsurface exploration and analyses to determine short- and long-term settlement magnitudes, expected seismic ground shaking magnitudes and characteristics, and potential and mitigation for seismic ground failure (including liquefaction). Each investigation should contain detailed foundation recommendations, and should be subject to review by the appropriate regulatory agency: City of Chula Vista Engineering Department.</p> <p>All high-rise structures will probably require deep foundations, or some type of mat foundation integrated into subterranean parking, to provide adequate foundation support for the structure.</p> | <p>Ground Settlement, Seismic Hazards, Groundwater Constraints, Water and Sewer Pipeline Grading</p> |



ISSUE

FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED BY THIS MEASURE

Geology/Soils/Groundwater (continued)

It should be noted that the use of a the currently planned soil-cement lining (covering a clay soil layer) for the 10-acre salt water lagoon (which encroaches onto compressible bay deposits) is a relatively brittle material, and may require relatively stringent subgrade improvement to ensure acceptable long-term performance. There are numerous flexible pond liners—currently-available which would require less subgrade modification to provide suitable foundation support for the pond liner; other options for this type of liner, including clay soil liners and flexible pond liners. The applicant must show which liner would be used and any subgrade improvements necessary, and the choice and design must be approved by the City.

To reduce the risk of property damage and injury caused by seismic shaking, geotechnical studies should specifically address seismic analysis based on site-specific subsurface data. At a minimum, seismic analysis should address seismically-induced slope failure, liquefaction, and ground surface accelerations. Measures are technically available to reduce seismic risk, and should be recommended as appropriate, and implemented into the project design.

The embankment separating the 10-acre salt water lagoon from San Diego Bay has tentatively been designed with a crown elevation of +11 feet. Wind-induced storm waves (discussed in the Hydrology section of this EIR), or earthquake-induced flooding could exceed the height of the embankment. An assessment should be made to evaluate stability of the embankment during these conditions and the likelihood of these hazards. Mitigation may include either elevating the height of the embankment or reinforcing the crown of the embankment.

Geotechnical studies should also address the impact of foundation location near or below the groundwater table, and suitable recommendations should be provided to mitigate both construction-period difficulties and uplift pressures that may affect both foundation elements and subterranean parking floor slabs extending below the transient groundwater level. Construction-period mitigation may require temporary dewatering and/or utilization of a gravel mat to provide a working surface upon which to operate construction equipment. Design techniques to accommodate transient groundwater highs may include thicker concrete slabs to provide sufficient dead weight to resist uplift pressures, deep foundations and/or structural foundations to restrain slabs, a permanent dewatering system—to—accommodate—transient groundwater highs, or pressure relief valves in the floors of parking structures to prevent damaging uplift pressures.

Hydrology/Water Quality

A detailed drainage plan must be prepared in accordance with the Chula Vista Code Subdivision Manual and applicable ordinances and adopted standards (including Thresholds Standard Policy). The plan must be approved and a permit issued by the Engineering Department prior to installation of any drainage structures. Any deviation from City standards must be approved by the City Engineer.

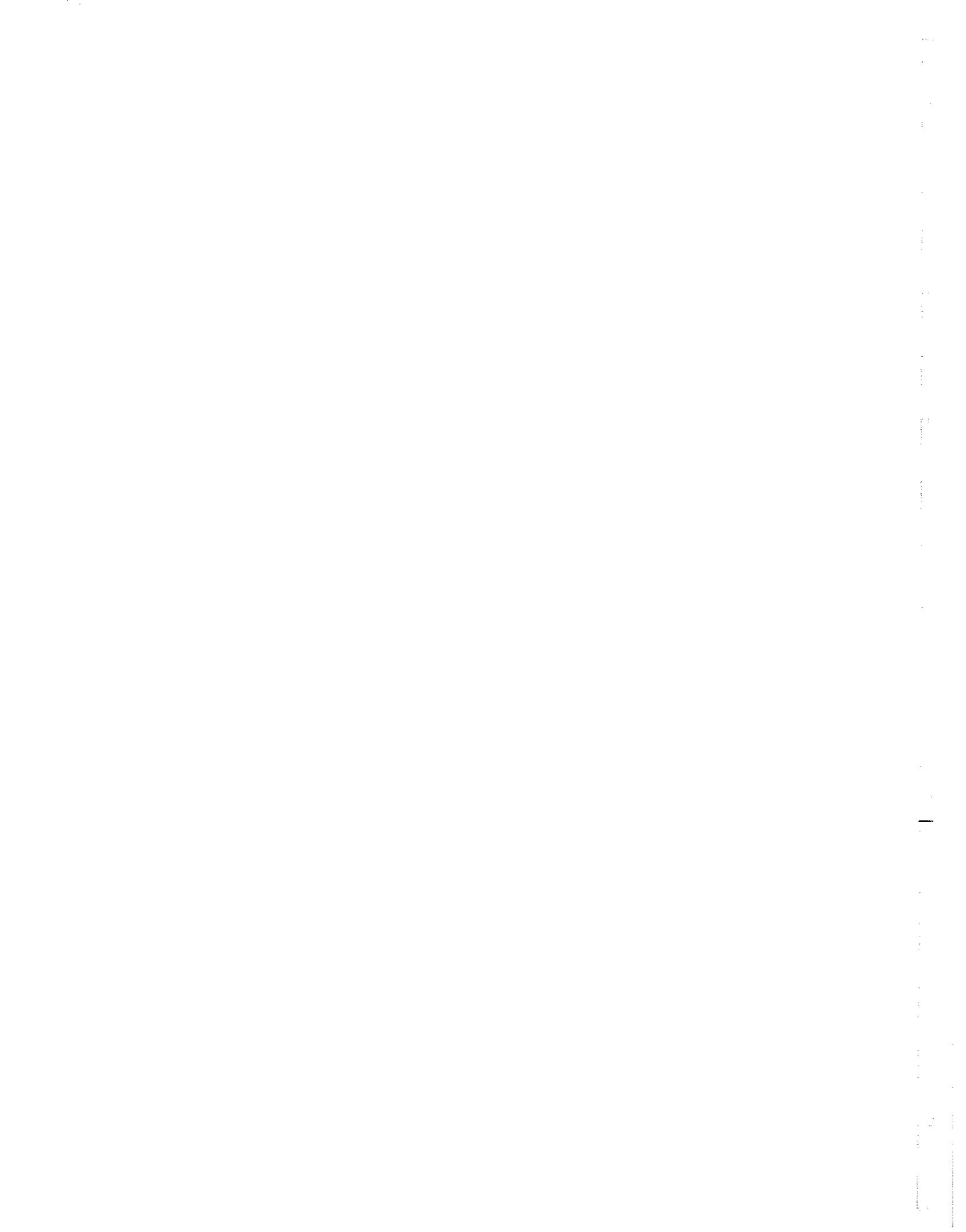
Ground Settlement, Seismic Hazards, Groundwater Constraints

Ground Settlement, Seismic Hazards

Ground Settlement, Seismic Hazards

Groundwater Constraints

Flooding, Erosion, Water Quality, Inconsistency with City Standards



ISSUE

FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED
BY THIS MEASURE

**Hydrology/Water Quality
(continued)**

A site-specific hydrology study should be performed for the Midbayfront site, addressing such issues as flooding of low-lying areas during high tide conditions and the effect of wind-driven waves generated from within San Diego Bay; flooding from the Sweetwater River; and erosion from inland or coastal flooding; and the effectiveness of the proposed detention basin. As water quality is a major concern, studies should address the effectiveness of proposed oil and sediment traps, as well as that of the desilting basin in removing both sediment and chemical pollutants from the 'F' & "G" Street Marsh and, ultimately, San Diego Bay. shall be monitored for a minimum period of three years. All recommendations must be implemented before or during project construction.

Recommendations should be provided for erosion control to mitigate both coastal erosion and erosion from inland flooding. Additionally, consideration should be given to the effects of relatively high-velocity discharges from monitoring shall be performed for a minimum period of three years to evaluate the effectiveness of the proposed outlet protection at the on-site storm drains discharging directly into San Diego Bay. The existing bay deposits, located bayward of the two proposed discharge points, are highly susceptible to erosion and the resulting scour is likely to impact sensitive marine habitat west of the Midbayfront site, if not properly mitigated by the proposed discharge options.

Traps for contaminant control must be approved by the City Engineering Department before they may be installed. The City Engineering Department must verify that all EPA, and any Regional Water Quality Control Board Standards and all other applicable regulations are met. If they are not, grading may not proceed until the standard is met. Proof of effectiveness must be shown before approval can occur.

The proposed on-site storm drain system should be designed in accordance with City of Chula Vista Standards and a clarification made regarding the discrepancy in minimum gradients for gravity storm drains, as specified in the proposed LCPR No. 8-text and the City of Chula Vista Subdivision Manual. Any deviation from these standards must be approved by the City Engineer. In addition, calculations should be made for the 100-year design storm, as required by FEMA, and prudent engineering practice.

Detailed groundwater quantity and quality studies must be performed to (1) verify the ability to pump the required amount of water to fill the 10-acre public lagoon, (2) assess the quality of the groundwater, and (3) assess the same two above. The applicant shall address the groundwater quality and quantity for replacement water required for the semi-public lagoon in the north portion of the site (assuming groundwater extraction as the source; if it is not, the source must be approved by the City). If groundwater is not available in the required amount, and/or if it is contaminated, then a different source must be used. An intake from the San Diego Bay is a possible, feasible source.

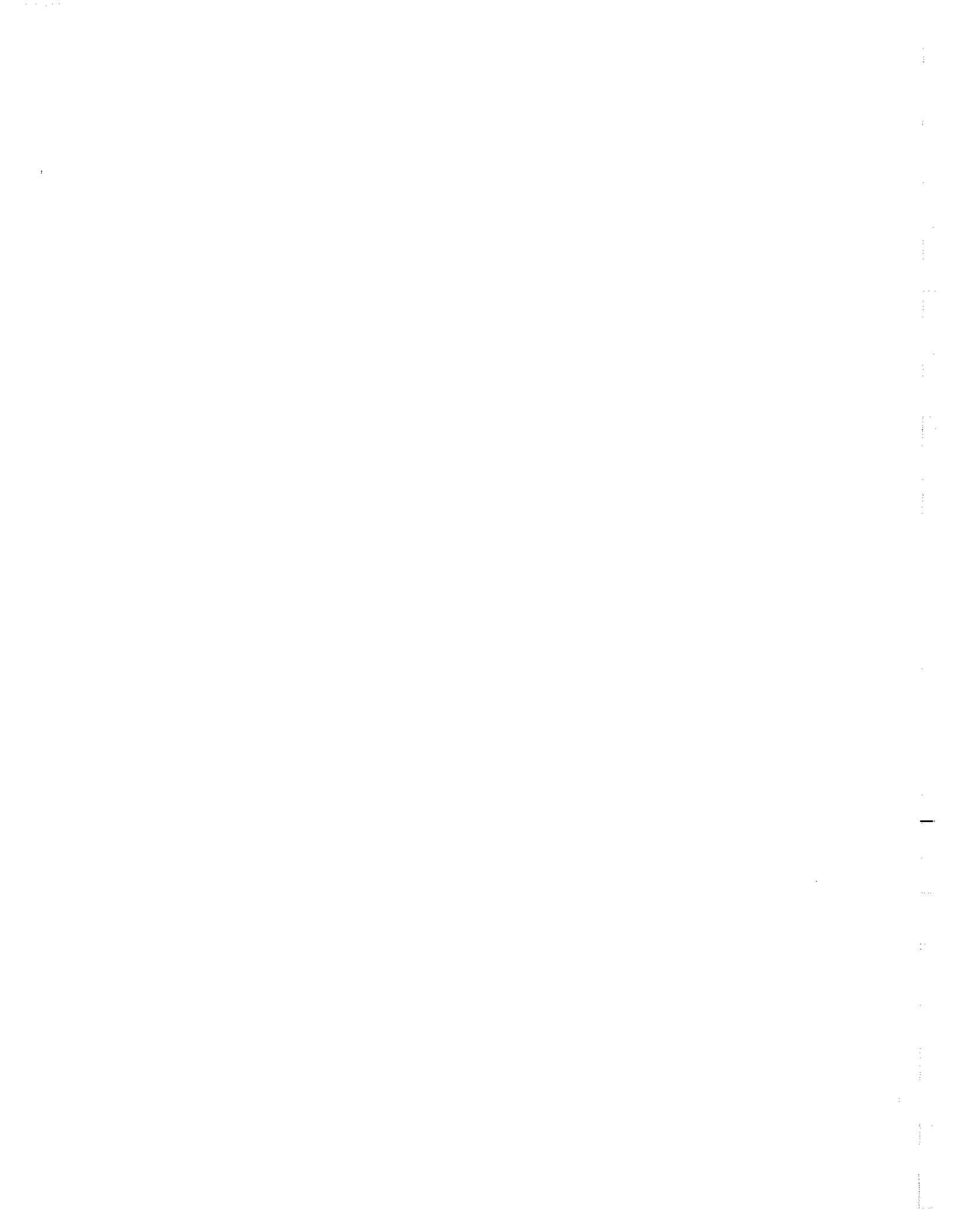
Flooding, Erosion, Water Quality, Inconsistency with City Standards

Flooding, Erosion

Flooding, Erosion

Inconsistency with City Standards

Water Quality



ISSUE

FEASIBLE MITIGATION MEASURES

The operation of the detention basin upstream of the "F" & "G" Street Marsh is intended to maintain water quality, and specific measures are provided in the proposed LCPR No. 8 text (1989-16-84) to maintain proper performance; however, some of the measures are considered either unachievable or inadequately described. These measures include:

- Control of detention basin discharge (State how/when this is controlled)
- Reduce contaminant-prior-to-transfers (need-to-state-how)
- Increase street cleaning (need-to-state-how-often)
- Clean parking lot-catch basins frequently (need-to-state-how-often)
- Regulate construction schedules (need-to-charity)
- Control erosion at new construction sites (need-to-state-how)

The Recommended measures which are considered achievable are stated below and should be followed as these and the above measures which need to be modified would be necessary to maintain water quality in both the "F" & "G" Street Marsh and lower San Diego Bay.

- Re-seed or apply vegetation cover to disturbed areas.
- Control littering by providing adequate receptacles, frequent pickup, educational signs, and enforcement.

Biology

The proposed project should include low-flow diversions from the freshwater detention basin into the "direct-to-bay" delivery systems such that un-seasonal freshwater drainage does not pass through the F & G Street marsh. This could include a stand pipe drain near, but below the level of the detention basin-spillway. Normal wet season, storm waters should be allowed to discharge through the basin into the "F" & "G" Street Marsh.

The proposed project should implement all environmental management measures and mitigation programs. The project should include the preparation of a single bound program which incorporates the following biological resource management plans as individual sections:
- Predator Management Plan
- Human Activities Management Plan
- Landscape Design and Management Plan
- Water Quality/Rainoff/Drainage Management Plan
- Mudflat and Wetland Monitoring Plan
- Project Lighting Plan
- Construction Monitoring and Management Plan
- C.C.R.s/Ordinances/Applicable Policies

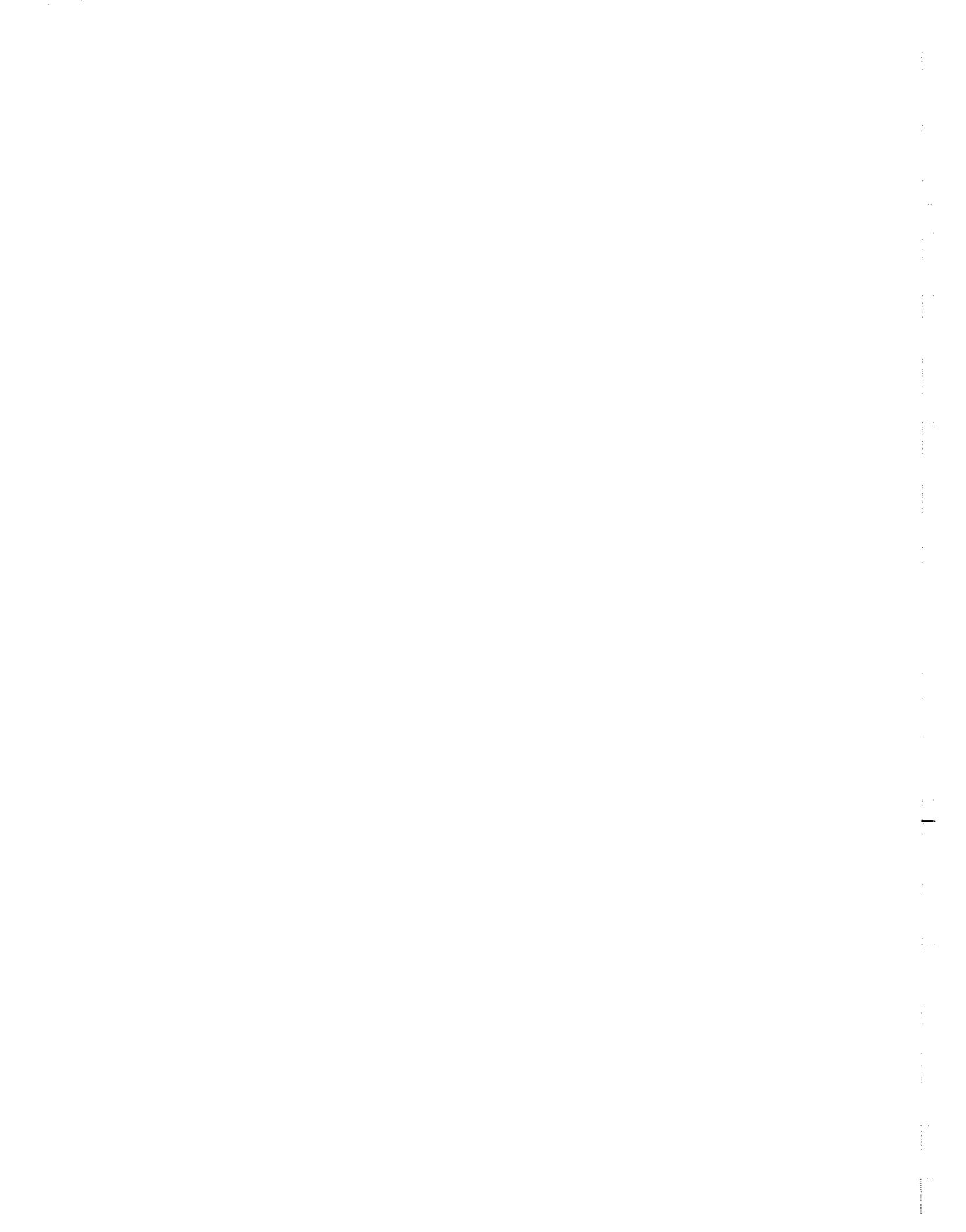
This document should be available in a completed form for review during the project-level environmental process.

IMPACTS MITIGATED BY THIS MEASURE

Water Quality

Increased Freshwater Input
Contaminant Discharge;
Contaminant Discharge;
Sediment Accretion and
Erosion

Increased Freshwater Input
Contaminant Discharge;
Sediment Accretion and
Erosion, Human/Pet
Presence, Alteration of
Predator/Prey Regimes,
Alteration of Habitat Use
Areas, Elvers, Mudflats
Construction Impacts, Vessel
Control Requirements



ISSUE

FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED
BY THIS MEASURE

Biology
(continued)

All post-construction collector drains should be directed through large volume silt and grease traps prior to being shunted into the freshwater detention basin or the bay discharges. The trap/traps placed on lines entering the detention basin should be triple-chambered.

The silt and grease traps should be maintained regularly with thorough cleaning to be conducted in late September or early October and as needed through the winter and spring months. Maintenance should be done by removal of wastes rather than flushing. City inspections of these traps should be done to ensure that maintenance is occurring as required.

Long-term silt removal maintenance of the detention basin should ~~not be conducted to minimize~~ following the initial construction phases of the proposed project. This ~~maintenance~~ cleaning should not be required since the traps, if properly constructed and maintained, will capture the vast majority of the silts which would be deposited in this basin.

The two "direct to bay" drains should be extended to subsurface discharge points located in the existing J Street Marina boat channel. These discharge points should be located at a minimum depth of -10 ft. MLLW and should be buried in the mudflat to a point below the existing eelgrass beds. Drain placement should seek to impact the least amount of eelgrass habitat possible by either combining the drains or avoiding dense eelgrass beds. Surface contours should be restored and any construction impacts to eelgrass should be mitigated by replanting over the pipeline. As an alternative, the "direct to bay" drains should be designed and constructed with effective energy dissipators and flow diffusers which eliminates erosion or accretion of the mudflats and ensures the protection of adjacent eelgrass beds. An expected loss of mudflat totaling no fewer than 1.7 acres should be replaced within the NWR in a location away from the proposed development area. These drains and the surrounding mudflats and eelgrass beds should be monitored in accordance with an approved Mudflat and Wetlands Monitoring Plan (Requirement 1) for a period of 3 years and any additional corrective measures required should be implemented and any additional impacted areas resulting should be replaced by the creation of a similar area from the uplands of the "D" Street fill or Gunpowder Point.

Contaminant Discharge,
Sediment Accretion and
Erosion

Contaminant Discharge,
Sediment Accretion and
Erosion

Increased Freshwater Input,
Contaminant Discharge,
Sediment Accretion and
Erosion, Eelgrass, Mudflats

Eelgrass, Mudflats



ISSUE

FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED
BY THIS MEASURE

Biology
(continued)

Further studies are required to evaluate the effects of groundwater pumping to fill the proposed lagoon. If these studies indicate that this is not a suitable solution for reasons of contaminants or reduced salinities, a saltwater intake from the bay should be placed in a drain alignment (5.a.) or along a similar low impact corridor and should be separated from the drain at a point below the existing eelgrass beds. Impacts associated with the placement of this system should be mitigated by the rapid restoration of impacted areas ~~creation-of-a-similar-amount-of-new-mudflat-area~~. The saltwater-outlet ~~any required discharge of drainage system from the area for lagoons~~ should be to the proposed storm drain system rather than directly to the bay.

No "in water" construction shall be allowed during the period of 1st April -15th September to avoid the potential for elevating turbidity in the nearshore foraging and chick training areas of the California Least Tern. ~~No extensive activity earthmoving or high intensity activity will occur within 200 feet of any salt marsh, freshwater marsh, or mudflat habitat during the period 15 March to 21 August without prior approval by the U.S. Fish and Wildlife Service and California Department of Fish and Game.~~ Further, any other activities which are identified by the biological monitor as having this effect should be precluded from occurring during this period. If it can be demonstrated that the least tern has not yet arrived in south San Diego Bay, or has departed earlier than the specified dates, the applicant or agent may petition the City to modify this timing constraint. The City, acting in consultation with the USFWS shall have the ability to modify this period to reflect the presence of terns during the actual year(s) of construction. No construction activity, earthmoving, or high intensity activity will occur within 200 feet of any salt marsh, freshwater marsh, or mudflat habitat during the period 15 March to 31 August without prior approval by the U.S. Fish and Wildlife Service and California Department of Fish and Game.

Several desilting basins and back-up basins large enough to handle storm water runoff should be maintained during the construction phase so that no silts are allowed to leave the construction site. In addition, construction dewatering should be directed into a basin with a filter-fabric, gravel leach system so that clear water is released into a basin. As an alternative, dewatering water should be pumped across the mudflat into the boat channel and discharged at a point above the bottom to avoid re-suspending bottom silts, but at a depth of at least 8 feet.

Fertilizers, pesticides and herbicides utilized within the landscaping areas of the project should be of the rapidly biodegradable variety, and ~~may-be-found-on-lists-of-acceptable-chemicals-provided-by-the-registered-approved-for-use-near-wetlands~~. Further plans required for water quality management, landscape management, and runoff management should be developed in accordance with Requirement 1.

All landscape chemical applications should be done by a state-certified landscape contractor.

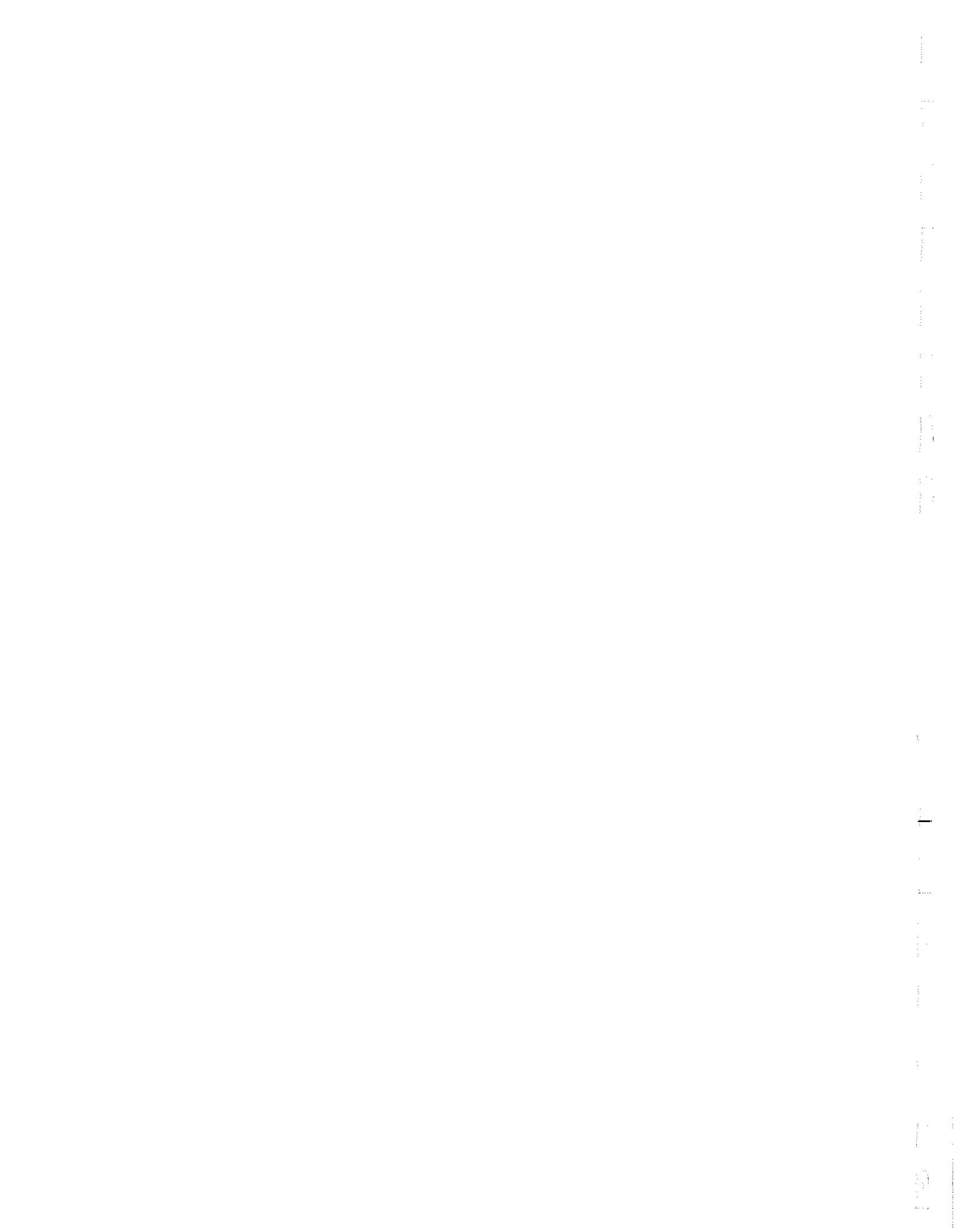
Contaminant Discharge,
Sediment Accretion and
Erosion, Eelgrass, Mudflats

Construction Impacts,
Alteration of Pred/Comp/
Prey Regimes, Eelgrass,
Mudflats

All Drainage and Water
Quality Impacts, All Marine
Resources Impacts

Contaminant Discharge,
Vector Control Requirements

Contaminant Discharge,
Vector Control Requirements



ISSUE**FEASIBLE MITIGATION MEASURES****IMPACTS MITIGATED BY THIS MEASURE****Biology
(continued)**

Landscape plant materials to be utilized in the project area should be submitted to the City landscape architect for review. Plant materials which are known to be invasive in salt and brackish marshes such as *Limonium* or *Carpobrotus* species, or those which are known to be attractive as denning, nesting or roosting sites for predators such as *Washingtonia* or *Contadina*, should be restricted from use.

A "biologically aware" construction monitor should be required for all phases of grading and installation of drainage systems. The monitor should be employed through the City and should report directly to a specific responsible person in the Engineering, Planning or Community Development Department should construction activities fail to meet the conditions outlined or should unforeseen problems arise which require immediate action or stopping of construction activities. This monitor may be desired to continue monitoring on a reduced basis during actual building construction.

The proposed bayfront development and parks should be designated as a "no pets" area. This means posting all of the parklands/public access areas and imposing fines based on the existing or new City municipal codes, and posting the development areas and including this restriction in all leases and enforcing these restrictions. **Plans required to be reviewed at the project level**

Open garbage containers should be restricted and all dumpsters should be totally enclosed to avoid attracting avian and mammalian predators and scavengers to the area. Garbage should be hauled away as often as possible. Citations for open garbage containers should be issued to any entity not complying. Restaurants and park areas are of special concern. **Plans required to be reviewed at the project level**

Human access to marshlands and buffer areas should be restricted through fencing and signs. This restriction should be enforced with trespass citations and fines. Specific areas of concern are along the fringes of Vener Pond, "E" Street Marsh and Sweetwater Marsh. Additional human/pet encroachment should be restricted through fencing and visual buffers at the mouth of the "F" & "G" Street feeder channel and southeast of the "F" Street/Marina Parkway intersection. **Detailed landscape and buffer design plans required at the project level**

A predator management program for the Chula Vista Bayfront should be developed to control domestic as well as wild animal predators. This program should utilize the Connors (1987) plan as a basis, but should be tailored to fit the needs of the proposed development. This plan should include the use of fines as an enforcement tool to control human and pet activities. The plan should be comprehensive and should include management of predators within the adjacent wildlife refuge as well as the proposed development areas. **Detailed landscape and buffer design plans required at the project level**

Construction Impacts
Human/Pet Presence,
Alteration Pred/Comp/Prey
Regimes, Alteration of
Habitat Use Areas

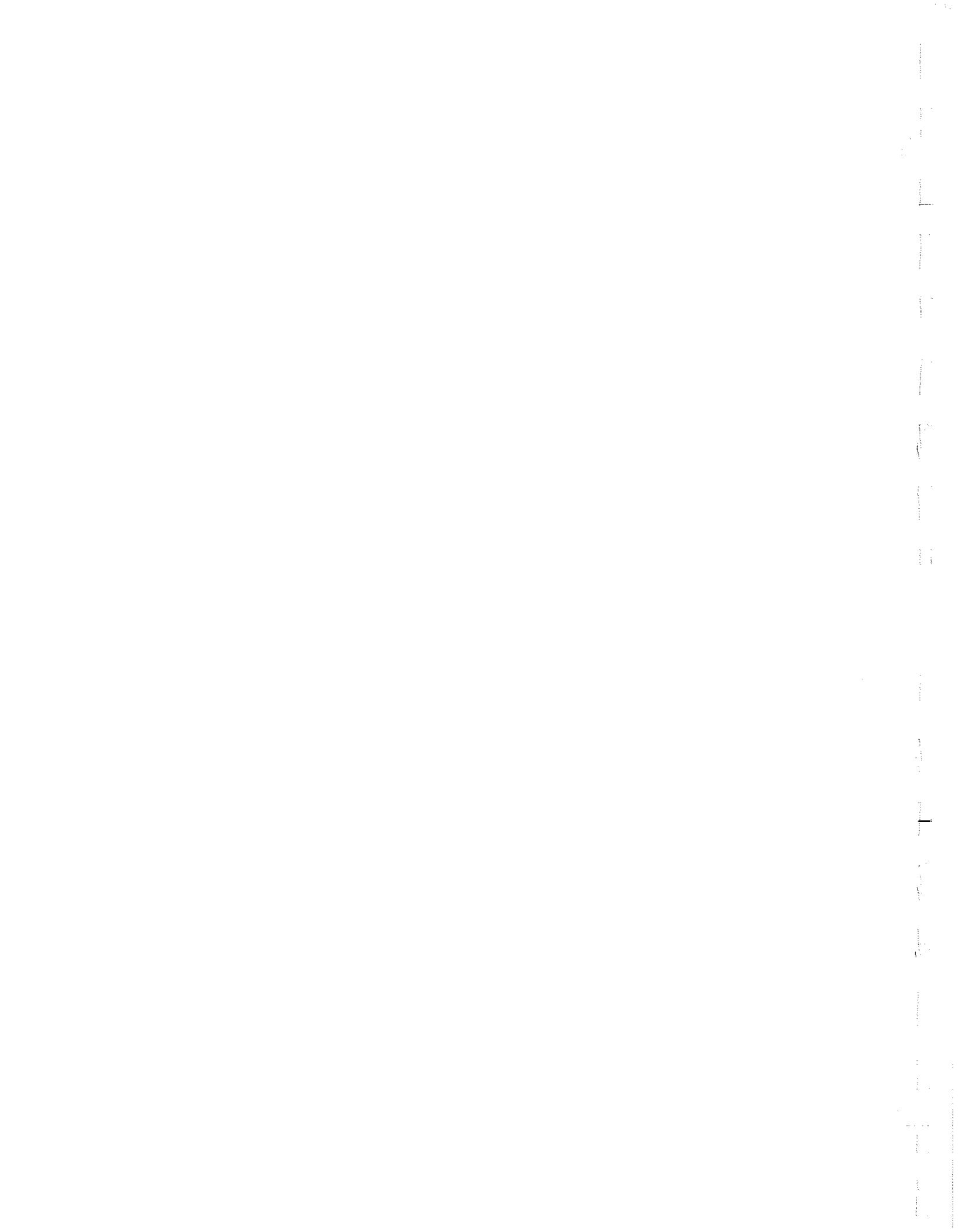
Construction Impacts

Construction Impacts
Human/Pet Presence,
Alteration Pred/Comp/Prey
Regimes

Human/Pet Presence,
Alteration Pred/Comp/Prey
Regimes, Vector Control
Requirements

Human/Pet Presence,
Alteration Pred/Comp/Prey
Regimes, Vector Control
Requirements

Human/Pet Presence,
Alteration Pred/Comp/Prey
Regimes, Vector Control
Requirements



ISSUE

FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED BY THIS MEASURE

Biology (continued)

A full-time enforcement staff of two or more officers should be funded by revenues generated within the bayfront or by other funding mechanisms to conduct the predator management program, ensure compliance, issue citations, and conduct routine checks to ensure maintenance of other mitigation requirements (i.e., silt/grease trap maintenance, etc.). Such officers should work closely with the USFWS in enforcement issues as they relate to Federal Reserve Lands. Officers should have training in predator control and should possess the necessary skills, skills, permits and authority to trap and remove problem predators. ~~It is recommended that these officers be accountable to the multi-representative Bayfront Conservancy Trust to ensure that multi-jurisdictional conflicts do not impede the effectiveness of the management programs. Detailed plans are required to be reviewed at the project level.~~

Annual funding should be designated for the purpose of trash control, repair and maintenance of drainage facilities, fencing, the predator control program, and mitigation programs for the project.

Increased Freshwater Input,
Contaminant Discharge,
Sediment Accretion and
Erosion, Human/Pet
Presence, Alteration
Pred/Comp/Prey Regimes,
Alteration Habitat Use Areas,
Elgrass, Mudflats, Vector
Control Requirements

Increased Freshwater Input,
Contaminant Discharge,
Sediment Accretion and
Erosion, Human/Pet
Presence, Alteration
Pred/Comp/Prey Regimes,
Alteration Habitat Use Areas,
Elgrass, Mudflats, Vector
Control Requirements

Increased Freshwater Input,
Human/Pet Presence,
Alteration of Habitat Use
Areas

Conversion of the small brackish water marsh to a freshwater detention basin would reduce, but not eliminate the resource values of this pond. These values should be reclaimed through the creation of additional salt and brackish marsh within the "F" & "G" Street Marsh area and the area between The "F" & "G" Street Marsh and San Diego Bay. Not less than 3.5 acres of Brackish Marsh and 4 acres of Salt Marsh should be created in this area. In addition, tidal flushing should be enhanced as identified in the Wetlands Research Associates restoration plans (1987). Further, if marshlands are to be created, as proposed, on both sides of Marina Parkway, undercrossing areas which remain dry during high tide would be required. It is suggested that large half-round corrugated culverts of a 10 foot or more radius be considered for this purpose. ~~Other options might also be suitable.~~ This restoration will also assist in mitigating a portion of the human encroachment impacts identified by expanding the area and value of the existing marshlands.

No further dredging, structural changes, or proposed uses should be allowed to occur along the mudflat or marshland areas of the bayfront. This includes such activities as marinas, water sports courses, etc. Additionally, the developer, City, and USFWS should jointly seek to have the San Diego Unified Port District post a line of buoys to limit access in the mudflat and marsh areas.

Human/Pet Presence,
Alteration Pred/Comp/Prey
Regimes, Alteration Habitat
Use Areas, Elgrass, Mudflats



| <u>ISSUE</u> | <u>FEASIBLE MITIGATION MEASURES</u> | <u>IMPACTS MITIGATED BY THIS MEASURE</u> |
|------------------------|--|--|
| Biology (continued) | <p>Buildings should utilize non-reflective glass and heavy architectural lines. A film glass manufactured by 3M is recommended. Plans required to be reviewed at the project level.</p> <p>Buildings facing marshlands should not include extraneous ledges upon which raptors could perch or nest. Additionally, roof peaks and crests which are exposed to the wetlands should be covered with an anti-perch material such as Nixalite. A commitment to correct any additional problem areas should be obtained should heavy incidence of perching be observed or should nest building by raptors be initiated on the buildings or in landscaping materials. Plans require review at the project level.</p> <p>Park uses within the lower third of the 6.8 acre park zone at the "F" & "G" Street Marsh feeder channel should be limited to passive use and should include such features as abundant native shrubland restoration, which would preclude active recreation in this area. Park and buffer areas along the "E" Street Marsh and Vener Pond should be designed to include a visual and human encroachment barrier between active recreation areas and the marshlands. This could be best accomplished using a vegetated berm separated from a lowered recreation area ("pits") by a fence. Passive overlooks could be incorporated on the development side of the recreational "pits." This would provide both a visual screen between the marsh and the high human activity as well as a distance separation between passive observation areas and the marshlands. Both needs would be met by this design approach. Buffer area landscape plans require project review.</p> <p>Kite flying activities result in high avian disturbance due to the kites being perceived as predatory birds and thus should be prohibited from parkland areas adjacent to wetlands or bay mudflats.</p> | <p>Human/Pet Presence, Alteration Pred/Comp/Prey Regimes, Alteration Habitat Use Areas</p> <p>Alteration Pred/Comp/Prey Regimes, Alteration Habitat Use Areas</p> <p>Human/Pet Presence, Alteration Pred/Comp/Prey Regimes, Vector Control Requirements</p> <p>Human/Pet Presence, Alteration Pred/Comp/Prey Regimes</p> <p>All Impacts (except Constriction Impacts)</p> <p>Human/Pet Presence, Pred/Comp/Prey Regimes, Alteration of Habitat Use Areas</p> |



| <u>ISSUE</u> | <u>FEASIBLE MITIGATION MEASURES</u> | <u>IMPACTS MITIGATED BY THIS MEASURE</u> |
|----------------|--|---|
| Paleontology | A qualified paleontologist should be at any pre-construction meeting to consult with the grading and excavation contractors. | Impacts to Fossils |
| | A paleontological monitor should be on-site on a half-time basis during the original cutting of previously undisturbed sediments of the deposits mapped as Bay Point Formation to inspect cuts for contained fossils. If the deposits are discovered to be fossiliferous then monitoring should proceed; if on the other hand they turn out to be barren colluvial deposits, then monitoring should not be continued. (The areal distribution of these deposits is summarized on the geological map of Kennedy and Tan 1977.) | Impacts to Fossils |
| Air Quality | In the event that well-preserved fossils are discovered, the paleontologist should be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on the site. Fossil remains collected during any salvage program should be cleaned, sorted, and cataloged and then with the owner's permission, deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum. | Impacts to Fossils |
| Traffic/Access | Mitigation is required by the APCD before an Authority to Construct and a Permit to Operate is issued. Mitigation would include concurrent reductions in NO _x , ROG, and CO to "off-set" project (co-generation plant) emissions. Mitigation must be achieved before the plant may be built. Dust control measures required by the AQMD will be implemented during construction, and monitored via the Mitigation Monitoring Program. Such measures include maintaining adequate soil moisture as well as removing any soil spillage onto traveled roadways through site housekeeping procedures. | Co-Generation Plant Emissions Construction Impacts |
| | Reducing interference with existing traffic and preventing truck queuing around local receptors should be incorporated into any project construction permits. Construction traffic must be monitored via the Mitigation Monitoring Program; trucks must turn off engines while waiting, or not be allowed to enter the site again. The permits should limit operations to daytime periods of better dispersion that minimizes localized pollution accumulation. | Construction Impacts |
| | Various transportation control measures (TCMs) must be incorporated into the project. Such measures would be aimed primarily at employees on the project site, but might also include site residents and visitors in certain instances. Measures that should be included are:- Airport shuttle services for destination resort visitors: | Incremental Vehicular Emission Impacts |



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FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED BY THIS MEASURE

Traffic/Access (continued)

- Ridesharing
- Vanpool Incentives
- Alternate Transportation Methods
- Work Scheduling for Off-Peak Hour Travel
- Transit Utilization
- Program Coordination
- Traffic Signal Coordination
- Physical Roadway Improvements to Maintain LOS of "D" or Better

The effective implementation of these various TCMs will be significantly enhanced if they are coordinated through a transportation management agency (TMA) dealing specifically with bayfront traffic demand management. Formation of such a TMA, including funding of a TMA coordinator and mandatory tenant participation through CCR covenants in tenant leases, will maximize the potential for emissions reduction. The establishment of minimum participation goals and the formation of a Midbayfront TMA must be a condition of approval for the proposed LCPR No. 8 to mitigate air pollution effects from any increased development intensity.

The following Planned Roadway Improvement Projects proposed by the developer and/or Cairns must be implemented to achieve the cited impacts associated with the proposed project and other planned developments in the Bayfront area. As stated in the previous chapter, these mitigation measures have been incorporated in the LCU analysis for the study area intersections.

1. Restripe the "E" Street overpass over I-5 to provide two through lanes per direction, and two left-turn lanes from eastbound "E" Street to I-5 northbound on-ramp.
2. Widen the northbound I-5 on-ramp at "E" Street to accommodate the dual left-turn lanes from eastbound "E" Street.
3. Widen westbound "E" Street east of the I-5 northbound on-ramp intersection to provide a separate right-turn lane from westbound "E" Street to the I-5 northbound on-ramp.
4. Restripe I-5 northbound off-ramp at "E" Street to provide an exclusive left-turn lane and a shared left- and right-turn lane.
5. Construct I-5 southbound off-ramp with four lanes to "E" Street/Marina Parkway. Additionally, provide a loop ramp for westbound "E" Street traffic to access southbound I-5.



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FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED BY THIS MEASURE

With regard to these proposed improvements, the City of Chula Vista Traffic Engineer, Hal Rosenberg, had some comments. In a letter dated November 16, 1990, to USA (see Appendix I-G), Mr. Rosenberg cited several issues to be resolved regarding these mitigation measures. Two of these issues (Items No. 1 and 4) must be resolved by the Developer and Caltrans and the City of Chula Vista prior to accepting them as project mitigation.

In addition to these improvements, a traffic signal is warranted at the intersection of "F" Street/Woodlawn Avenue, due to increased traffic volume generated by the Midbayfront Development Project and the redevelopment of the Woodlawn Avenue corridor between I-5, "E" Street, Broadway, and "H" Street. This Woodlawn Avenue redevelopment area land use modification is contained in the adopted Chula Vista General Plan and calls for the generation of 30,000 to 40,000 new trips. For this analysis of the Midbayfront Project, we assumed that approximately 50 percent (20,000 trips per day) of the Woodlawn Avenue Corridor redevelopment would be developed at build-out. Thus, these new trips were included in the cumulative traffic analysis.

Significant impacts would occur to the capacity of "E" Street from I-5 to Woodlawn Avenue, although only slightly greater than the Existing Year 1990 or Future (Year 2000) No Project volume levels due to the diversion of east/west through traffic to new SR 54. Also, significant impacts would occur at the "E" Street intersections with the Bay Boulevard/I-5 southbound ramp and with the I-5 northbound ramp.

Implementation of the following measures, in addition to those identified above, would reduce the impacts to level of service D (at the "E" Street interchange intersections). However, the feasibility of these measures is not yet known, and, thus, confirmation of these improvements by the City of Chula Vista and Caltrans must be secured prior to accepting them as project mitigation.

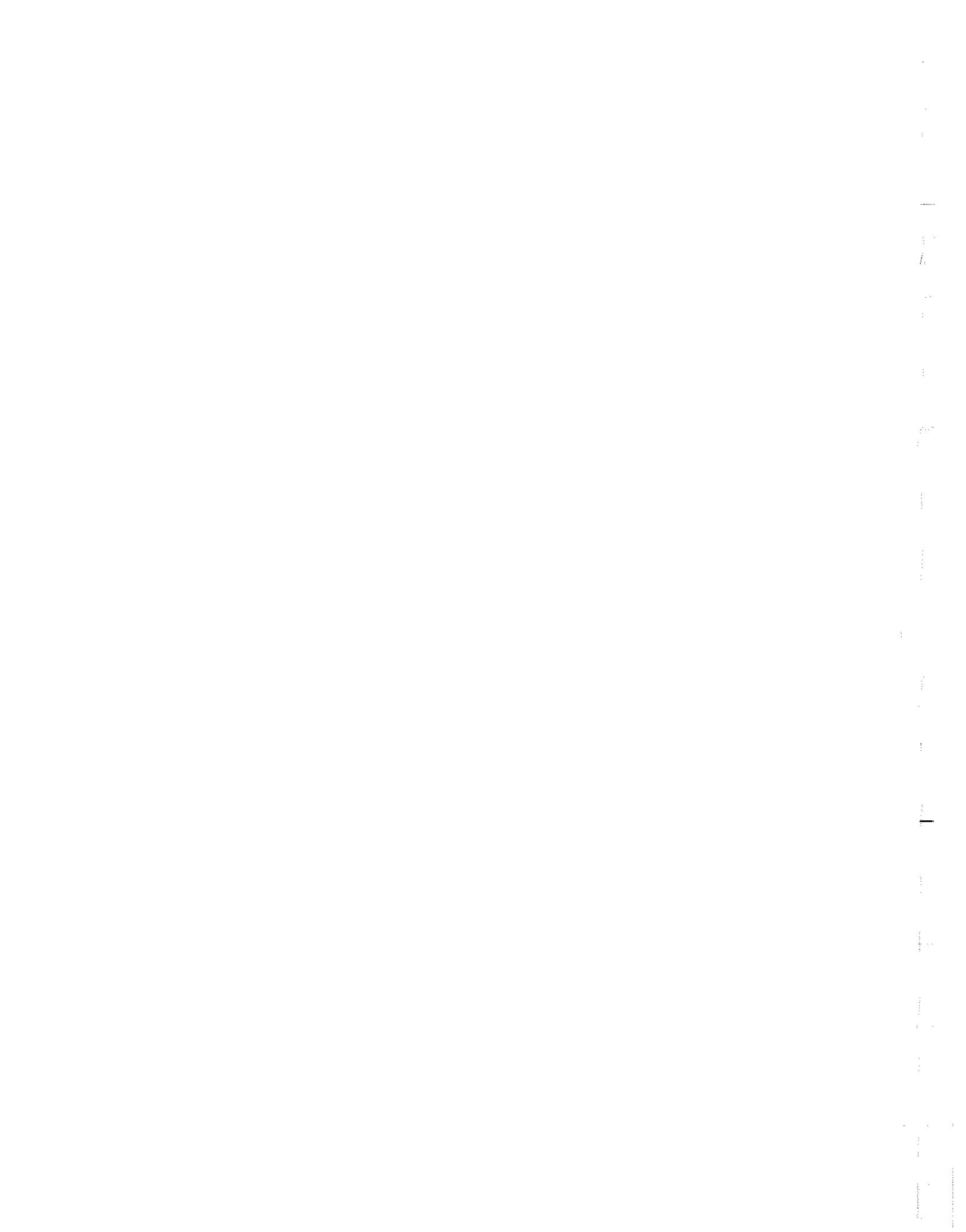
The following sections describe recommended mitigation measures for the proposed project and Alternative 8. Although several improvements to the circulation system are needed under the no-build scenario, these improvements are not the responsibility of the developer and are not discussed in this study.

Several study area intersections are expected to have levels-of-service worse than LOS C. In order to improve these levels-of-service, the following mitigation measures are recommended for the proposed project:



ISSUE**FEASIBLE MITIGATION MEASURES****IMPACTS MITIGATED BY THIS MEASURE**

| | | |
|---|--|---|
| 1 I-5/E Street Interchange Northbound Bay Boulevard at 'E' Street/Marina Parkway: Construction of an additional left/right-turn lane Northbound I-5 Off-Ramp at 'E' Street: Construction of an additional right-turn only lane | 2 Woodlawn Avenue/E Street Eastbound: Construction of an additional right-turn only lane | Land Use Compatibility - On-Site Residents |
| 3 Broadway/E Street Westbound: Construction of an additional left-turn lane and an exclusive right-turn only lane Eastbound: Construction of an additional left-turn lane and an exclusive right-turn only lane | 4 Broadway/F Street Westbound: Restriping to provide an exclusive right-turn only lane Eastbound: Restriping to provide an exclusive right-turn only lane | Land Use Compatibility - On-Site Residents |
| 5 Broadway/H Street Westbound: Construction to provide an additional through lane Eastbound: Construction to provide an additional through lane and an exclusive right-turn only lane | With these mitigation measures in place, and with the redistribution of project traffic, level-of-service is improved to LOS C on the arterial intersections and LOS D at the interchange of I-5/E Street. | Parkland - Regional Demand |
| Land Use | Incorporation of buffering design measures – including maximum insulation in all exterior and interior walls, floor separation design, window treatments to reduce light and intrusion, and designated parking spaces for residents within a separated and locked area of parking. | Land Use Compatibility - On-Site Residents |
| Parks, Recreation, Open Space | To mitigate the parking construction delay, and the absence of identification of when the funds would be available, the developer must include parks development and the associated adequate parking (approved by the City) within Phase 1. | Parkland - Regional Demand |
| | Mitigation for inadequate parking could be achieved simply by providing the required number of spaces. The City is responsible for determination of this number, and the applicant for Midbayfront development is responsible for provision of the spaces. | Public Access |



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IMPACTS MITIGATED
BY THIS MEASURE

FEASIBLE MITIGATION MEASURES

To mitigate the public access inadequacies, the applicant shall must submit an access plan, showing designated public parking areas, access routes to public areas, and access routes and signage from the east side of I-5 across "E" Street. The access plan must be approved by the City Planning and Community Development Departments.

Provision of a greater amount of parkland than is presently designed by the proposed project. It is infeasible to include a significantly greater amount of parkland because of the size of the Midbayfront site itself. However, a slightly greater amount of parkland, as shown by Alternative 2 (Existing LCP), Alternative 4 (Reduced Density 2A), Alternative 5 (Reduced Density 2), or Alternative 7 (Reduced Density 3, Modified Design) would help to work toward the City's desired design requirements. Whatever the final park acreage, because of its limited size, it is important that it be contiguous west of Marina Parkway. The current design, of the proposed project and Alternatives 3 and 4, have this park area dissected by a restaurant and/or hotel with bungalows, which should be eliminated. Because of the bayfront nature of the adjacent area to the west, uses in these park areas should be passive, such as picnicking (picnic tables and shelters), childrens' play areas and expansive turfed (grass) areas. On the north side, adjacent to the wetland, natural vegetation should exist with no grassy areas or other landscaping in order to discourage public use for reasons of public safety (discourage transient use) and wetland resource protection. At the most, a biking/jogging path could go through this area. Also, for the semi-public uses of the athletic facilities, fees for the public portion of these areas should be minimal or non-existent to encourage public use.

The City's Parks and Recreation Department has stated the need to hire one gardener for every five acres of parkland (a total of six), as well as to acquire additional landscaping equipment such as mowers.

Utility Service

Gas and Electric

Cumulative energy resource impacts can be mitigated to some extent by such generally accepted methods as sealing doors and windows, double-pane glass, increases in wall and ceiling insulation, and the incorporation of solar benefits. Time-controlled lighting systems throughout the industrial/commercial portions of the project would also conserve energy, lower electrical costs.

Parkland - Regional Demand
Requirements

Impacts-to-Services-and/or
Natural-Resources Energy



ISSUE

| Utility Service (continued) | <u>FEASIBLE MITIGATION MEASURES</u> | <u>IMPACTS MITIGATED BY THIS MEASURE</u> |
|--------------------------------|-------------------------------------|--|
| Fire | | |

The following measures are required by the City Fire Department to reduce the significant impacts to below a level of significance:

1. Maximum fire flow should be 5,000 gpm.
2. Fire department roadway access shall be provided to within 150 feet of all portions of any building.
3. All roadway widths shall be a minimum of 20 feet wide.
4. All apartments three stories in height or containing more than 15 dwelling units and every hotel three or more stories in height or containing 20 or more guest rooms shall be provided with a fully automatic fire sprinkler system.
5. A fire alarm/evacuation system shall be provided for all public assembly and multi-residential occupancies.
6. All Title 1924 CCR shall apply relative to public assembly and high rise occupancies.
7. Fire department access roadways greater in length than 150 feet shall be provided with the provision for the turning around of fire apparatus (either a 75 X 24 foot hammerhead or a 40 foot radius cul-de-sac).
8. Private fire hydrants will be required to satisfy the requirement that any part of the ground floor of any building shall be within 150 feet of a water supply. These hydrants shall be in place and operable prior to the delivery of combustible building materials.
9. Public fire hydrants will be required every 300 feet on public streets. However, if the location of major buildings is unknown, hydrants may be located specific to the buildings. This would result in more effective coverage, and could possibly result in fewer fire hydrants. For design interest, there are hydrants manufactured which have a lower profile than the traditional barrel type.
10. Address signs - Easily readable signs which can be seen from the street are necessary, using large, contrasting block letters and numbers.
11. Additional fire inspector would be necessary to handle additional work load created by this project.

Additionally, the applicant is responsible for payment of the additional ladder truck through the Developer Impact Fee, and the City's general fund would pay for the increase in annual salary for the four-person crew and fire inspector.

ISSUE
Utility Service
(continued)

FEASIBLE MITIGATION MEASURES

IMPACTS MITIGATED
BY THIS MEASURE

Solid Waste

In order to reduce the volume of trash which contributes to the incremental impact, a recycling program should be undertaken by the developer in conjunction with a local recycling company. This would include bins on site for the collection of recyclable materials such as glass, plastic, metal and paper products. Additionally, the development should incorporate trash compactors to reduce volume. This would not only reduce the number of trips to the Otay Landfill, but the space required there as well. Trash compaction and recycling would serve to lessen the impacts to the Otay Landfill.

Sewer

Because the City has existing capacity within the METRO system, no significant impacts to capacity would occur from the proposed project. However, the developer must submit detailed drawings to the City showing sewer line locations and capacities. The City Engineering Department must review the plans for consistency with the thresholds policy and with the system (which the project will tie into). Approval of these plans by the Engineering Department would eliminate the potential significant impact.

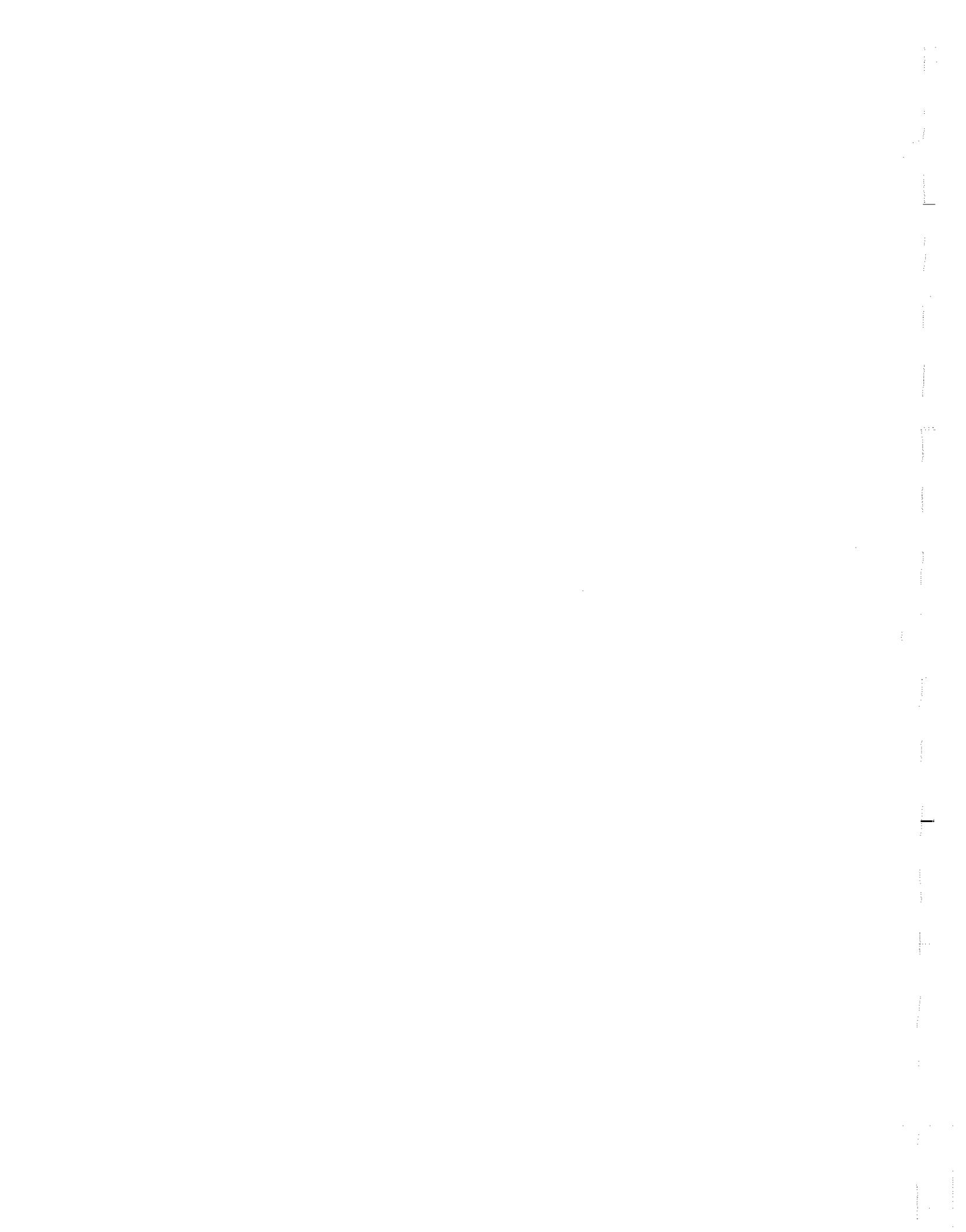
Water

The Sweetwater Authority analysis indicated specific areas where upgrading of water mains must be completed. These include:

- A 12 inch main in "F" Street from Broadway to approximately 830 feet west must be installed.
- A 12 inch main in Bay Boulevard from Moss Street to about Sierra Way extension westerly must be installed. (This will connect the project with supplies of water from the southern portion of Chula Vista, thus providing the project site with two sources of water instead of one.)
- The existing 8 inch main along "F" Street from Bay Boulevard running west must be upgraded to a 12 inch main.
- All on-site mains must be sized 12 inches.

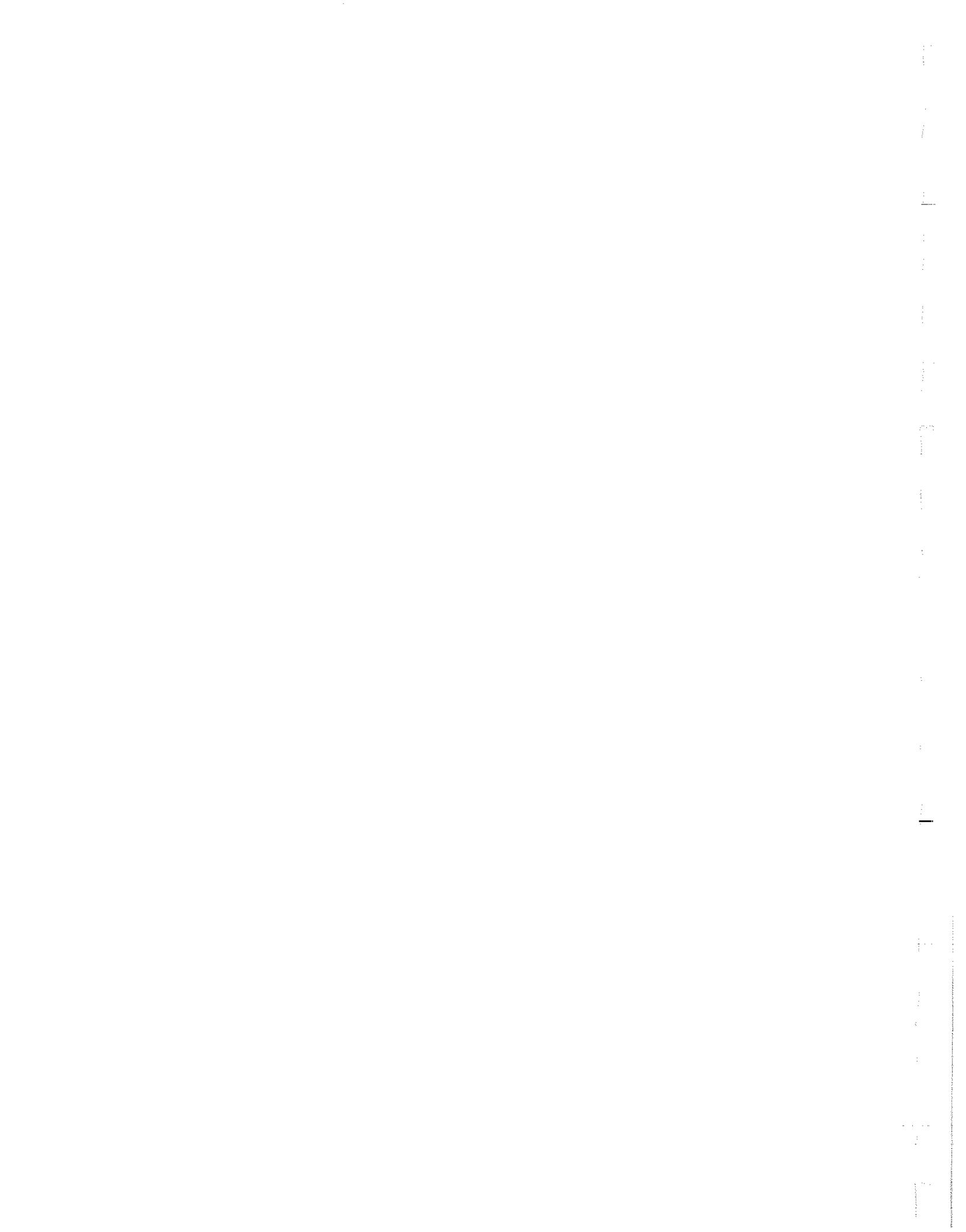
To mitigate the incremental impact to regional water supply, the applicant must provide water conservation measures at the project design level, including such elements as low-flow showers, low-flush toilets, timed irrigation, landscaping by drought tolerant species, drip irrigation where appropriate and development of reclaimed water lines for future use.

Regional Water Supply



| <u>ISSUE</u> | <u>FEASIBLE MITIGATION MEASURES</u> | <u>IMPACTS MITIGATED BY THIS MEASURE</u> |
|-----------------------------|--|---|
| Utility Service (continued) | <p>The potentially significant impact to water supply and adequacy of engineering systems for both of the lagoons could be mitigated by City Engineering Department review and approval of this required information and plans for the systems. If review shows that quantity and quality of water are not adequate, then a separate source must be found. The San Diego Bay is a possible, feasible source.</p> <p>Regarding incremental impacts to area water supply because of increasing regional demands, the developer must incorporate methods of water conservation such as reduced flow shower heads, low-volume toilets and timed sprinkler systems. These measures would help reduce demands for water.</p> | <p>Water Supply and Engineering Systems for Lagoons</p> |

Participation in a Mello-Roos Agreement would mitigate the impact:



the Draft EIR, and has been incorporated, where appropriate, in DEIR Section 3.0, as well as in revisions to Volume II. The new information provided by the applicant is available for public review at the City of Chula Vista, Community Development Department. The re-evaluation has also been expanded to include the analysis of the two new alternatives -- Alternative 8, the applicant's revised project; and Alternative 9 - developed by the project team to respond to comments. These two new alternatives are discussed in Sections 4.0 and 5.0 of DEIR Volume I.

In addition to incorporating this new information, the project team has also expanded and refined the impact definitions to clearly distinguish between those significant impacts that may be mitigable at a later stage of planning and CEQA compliance and those impacts that may only be mitigated through a major redesign of the project or selection of another alternative. In preparing the August 1990 Draft EIR, the category "Significant and Not Mitigable" was used to categorize a broad range of impacts -- including those that were not considered to be mitigable except through project redesign, as well as those considered to be significant and not mitigated at the present time, based upon the information provided by the applicant at the plan-level of CEQA compliance. In various instances, impacts classified in the DEIR as "Significant, Unmitigable" at the plan level, may be mitigable once more detailed studies and planning are completed by the applicant and the City.

Consequently, in order to clearly distinguish between these two major impact categories, the project team refined the impact definitions and re-evaluated all environmental impacts of the proposed project and alternatives based upon the following criteria and definitions:

- **"Significant and Not Mitigable"** - This category pertains only to those significant impacts that would not be mitigated below a level of significance at any stage of project planning and environmental compliance. Consequently, this impact category pertains to those effects that can only be avoided through project redesign or selection of another alternative.
- **"Significant and Not Mitigated at the Plan-Level of CEQA Compliance"** - This category of impacts applies to those environmental effects that are not presently mitigated by identifiable measures or the applicant's commitments. These impacts may or may not be mitigated at later stages of planning and environmental compliance. In most instances, additional baseline studies or project details are needed prior to determining whether mitigation would be feasible or not.
- **"Significant, Mitigable"** - Impacts that exceeded the threshold of significance are categorized as "Significant, Mitigable" in those instances where mitigation measures are readily available or where the applicant has already provided sufficient information and mitigation commitments. In this instance, additional studies and/or design information are not necessary to establish appropriate measures and their effectiveness in reducing impacts below the significant threshold.

- **"Adverse, Not Significant"** - Impacts considered to be adverse, but below a level of significance are listed under this impact level.
- **"No or Limited Impact"** - Impacts that are considered to be very minor or undiscernible are classified in this category.
- **"Beneficial Impacts"** - Impacts that will have a beneficial effect on the City of Chula Vista, its residents and/or its environmental resources are so noted under this category.

Table 1-1-A summarizes the re-evaluation of impacts for the proposed project and Alternatives 2-9. Table 1-2 provides details for the proposed project and alternatives regarding the significant impact issues and mitigation recommendations.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SETTING

The proposed Local Coastal Program Resubmittal No. 8 (LCPR No. 8) area consists of a total of approximately 790 acres and is located in the northwestern portion of the City of Chula Vista. The proposed LCPR No. 8 area is the same area shown in the existing certified LCP. The central core of the City of Chula Vista is located approximately 10 miles from downtown San Diego, and 4 miles from the Mexican border (see Regional Location Map, Figure 2-I).

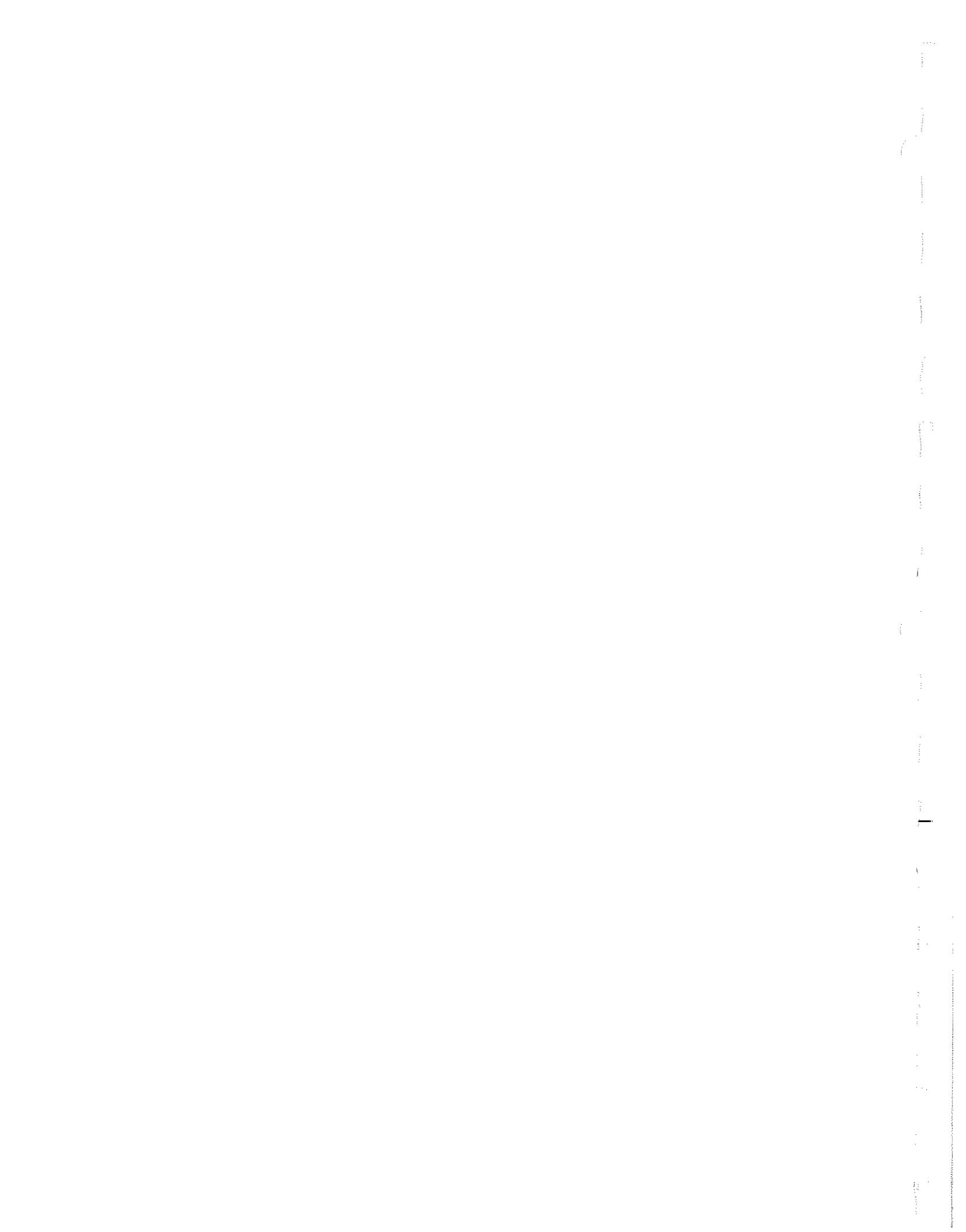
The relationship of the entire LCPR No. 8 area to the surrounding area is shown on Figure 2-II, LCP Resubmittal Area. As shown on this figure, the LCPR No. 8 area is divided into four subareas, as well as the recently established Sweetwater Marsh National Wildlife Refuge. The existing certified LCP is divided into different subareas, which show the Midbayfront as Subarea 1, and "D" Street Fill and Gunpowder Point as Subareas 1 and 2.

The surrounding area consists of San Diego Bay located to the west of the project site, the City of National City to the north, Interstate 5 to the east, and other developed land uses within Chula Vista to the east of I-5 and to the south of the site. Across the bay to the west is the "Strand" portion of the City of Coronado, and approximately two miles to the south is the terminus of the bay.

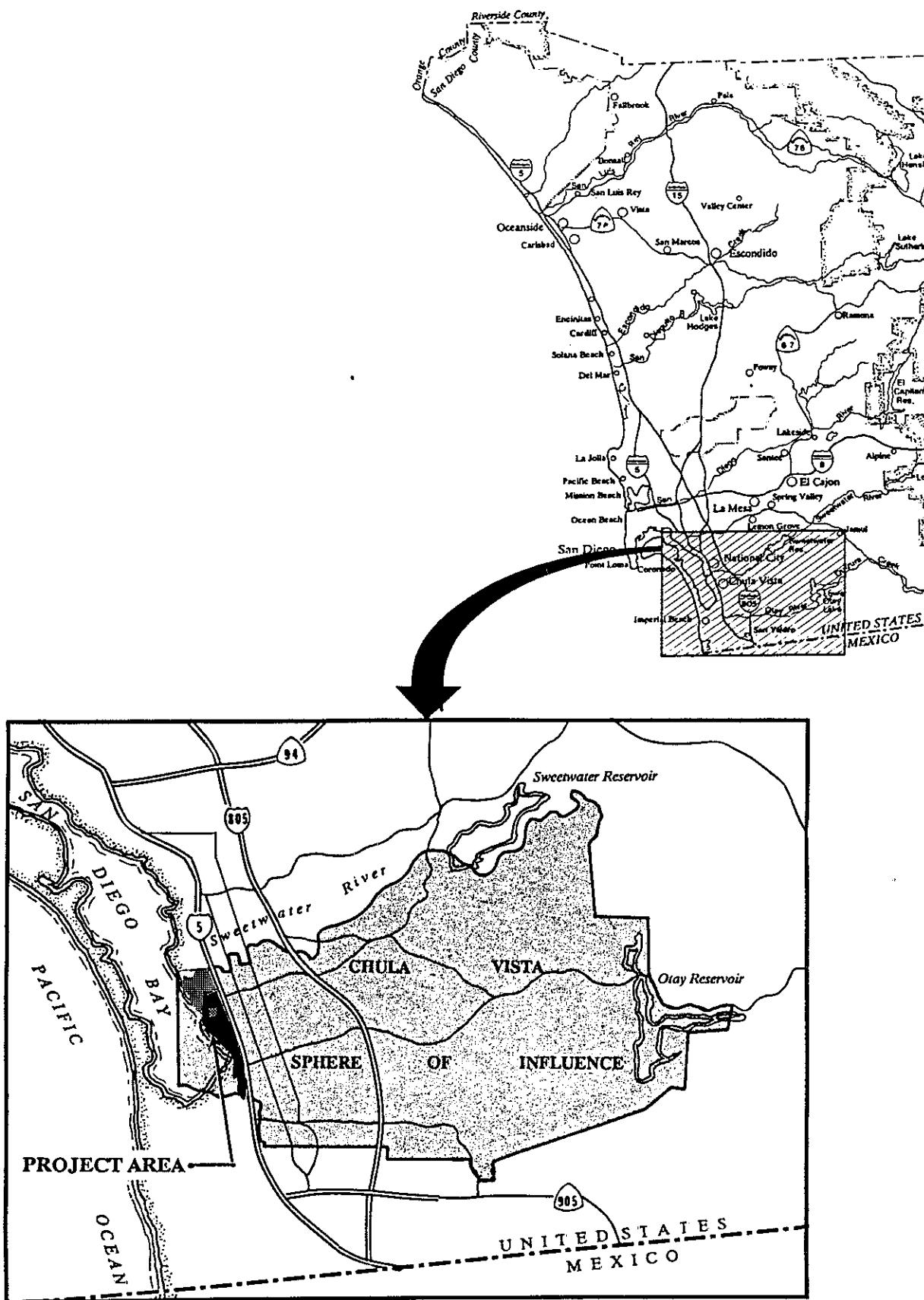
The LCPR No. 8 text revises the existing certified LCP in two main ways: (1) by showing the Sweetwater Marsh National Wildlife Refuge (NWR) as separate from the rest of the subareas, and (2) by concentrating most of the remaining text changes to the Subarea 1 (Midbayfront) portion of the bayfront. Additionally, the applicant, Chula Vista Investors, has proposed a Development Plan for Subarea 1, which is intended to be consistent with the LCPR No. 8 text regarding the subarea. Because the majority of both the proposed LCPR No. 8 text and the Development Plan affect only Subarea 1, this subarea is discussed in detail in this EIR. Where the proposed LCPR No. 8 does affect other subareas, the EIR addresses these areas as well.

Subarea 1 and the NWR areas are presently characterized by mostly undeveloped land which has been greatly influenced by San Diego Bay and the terminus of the Sweetwater River. The wetlands located throughout these areas are considered sensitive estuarine environments as they provide habitat for many types of plant and animal species, including species listed as endangered by state and federal agencies. Considerable research and documentation of the species and their habitats have occurred in this area, as it not only provides a unique example of one of the few remaining undeveloped parts of San Diego Bay, but has also been the location of previous development proposals.

The NWR, established on August 18, 1989, is approximately 316 acres in size and includes the largest remaining natural wetland area on San Diego Bay. The refuge was established because of its unique wetland habitat components which provide nesting and/or foraging for over 100 [190] species of birds, including state- and federally-listed sensitive and endangered species. The refuge is considered to be a very sensitive ecosystem and, as such, no traffic

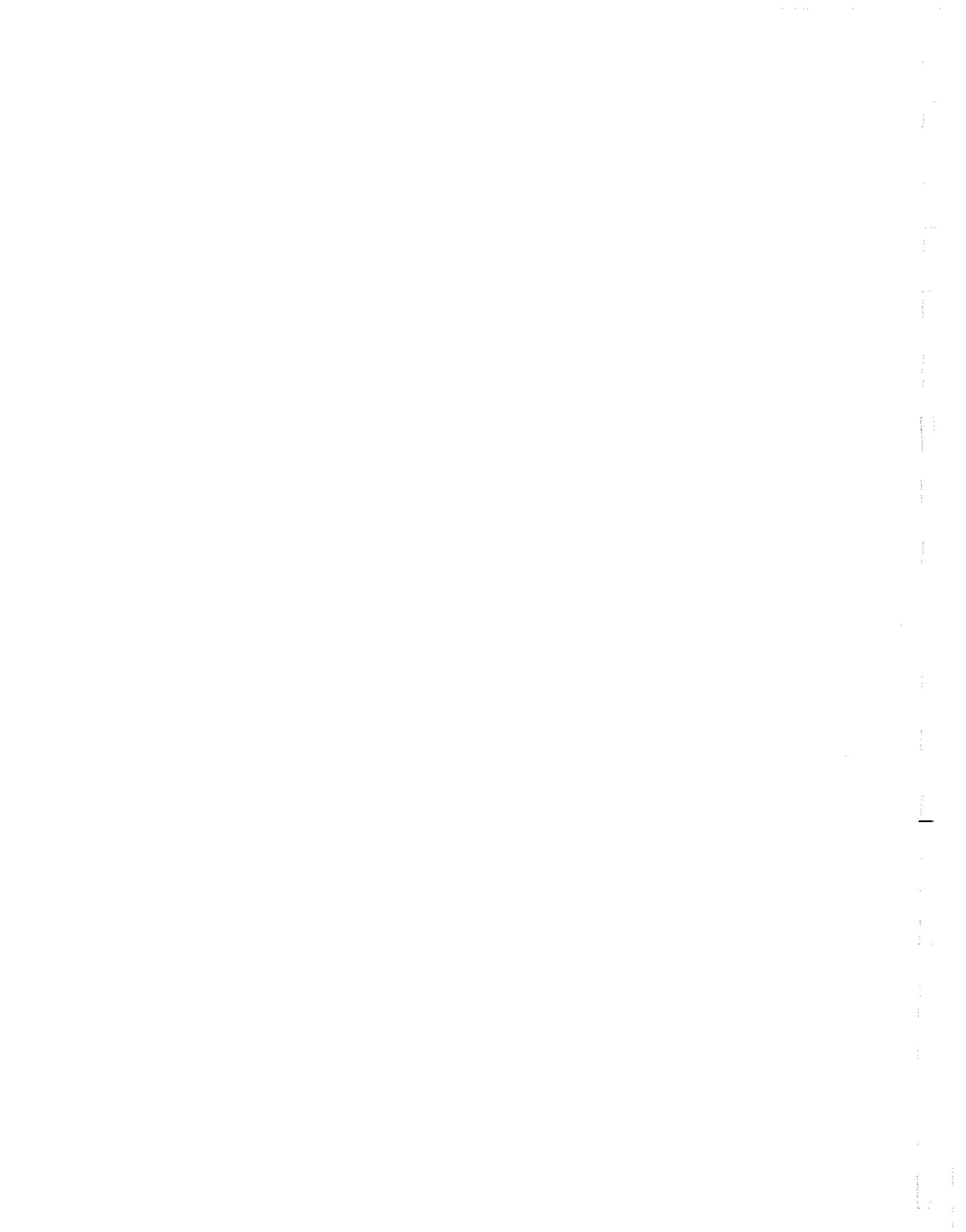


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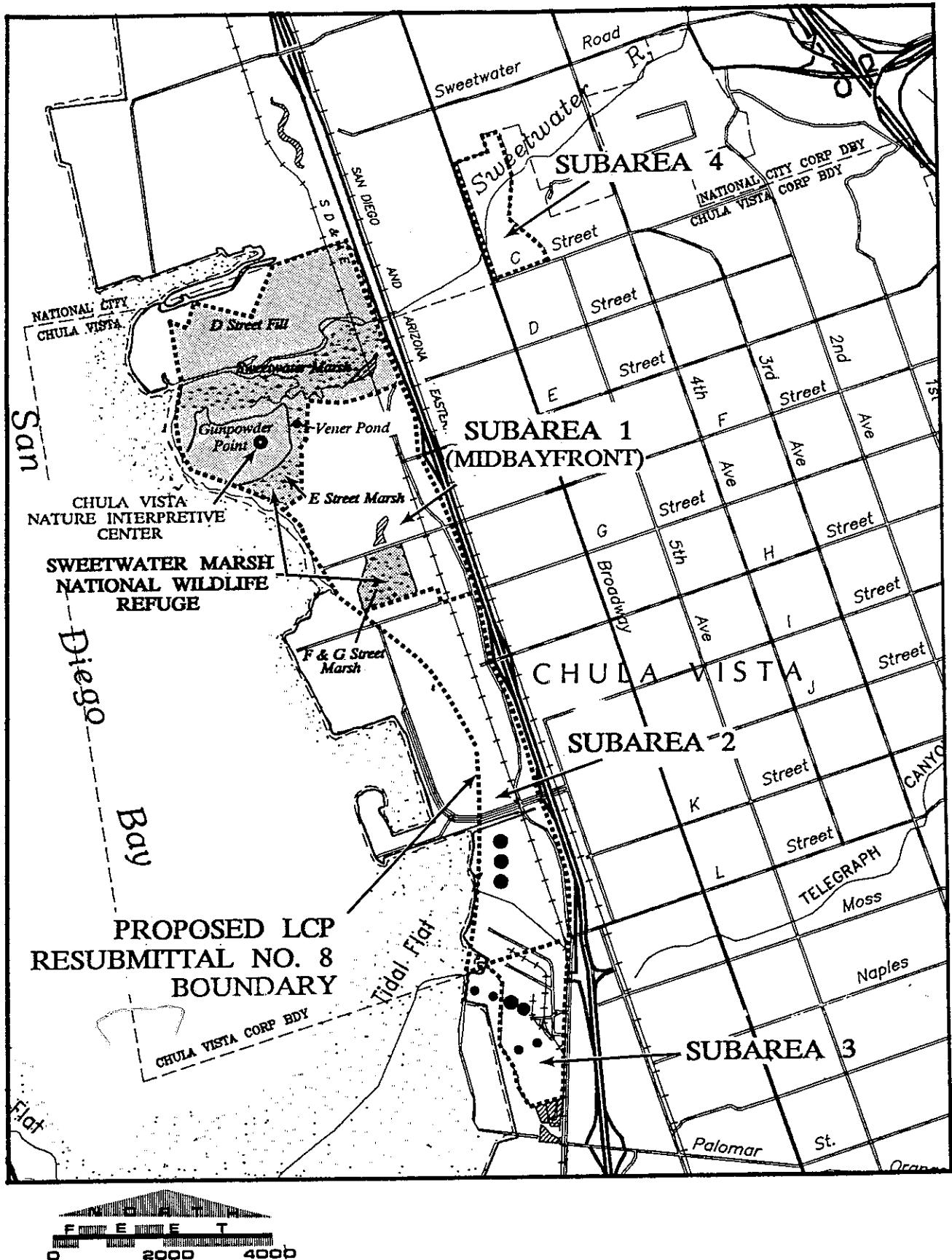


REGIONAL LOCATION MAP

Figure 2-I

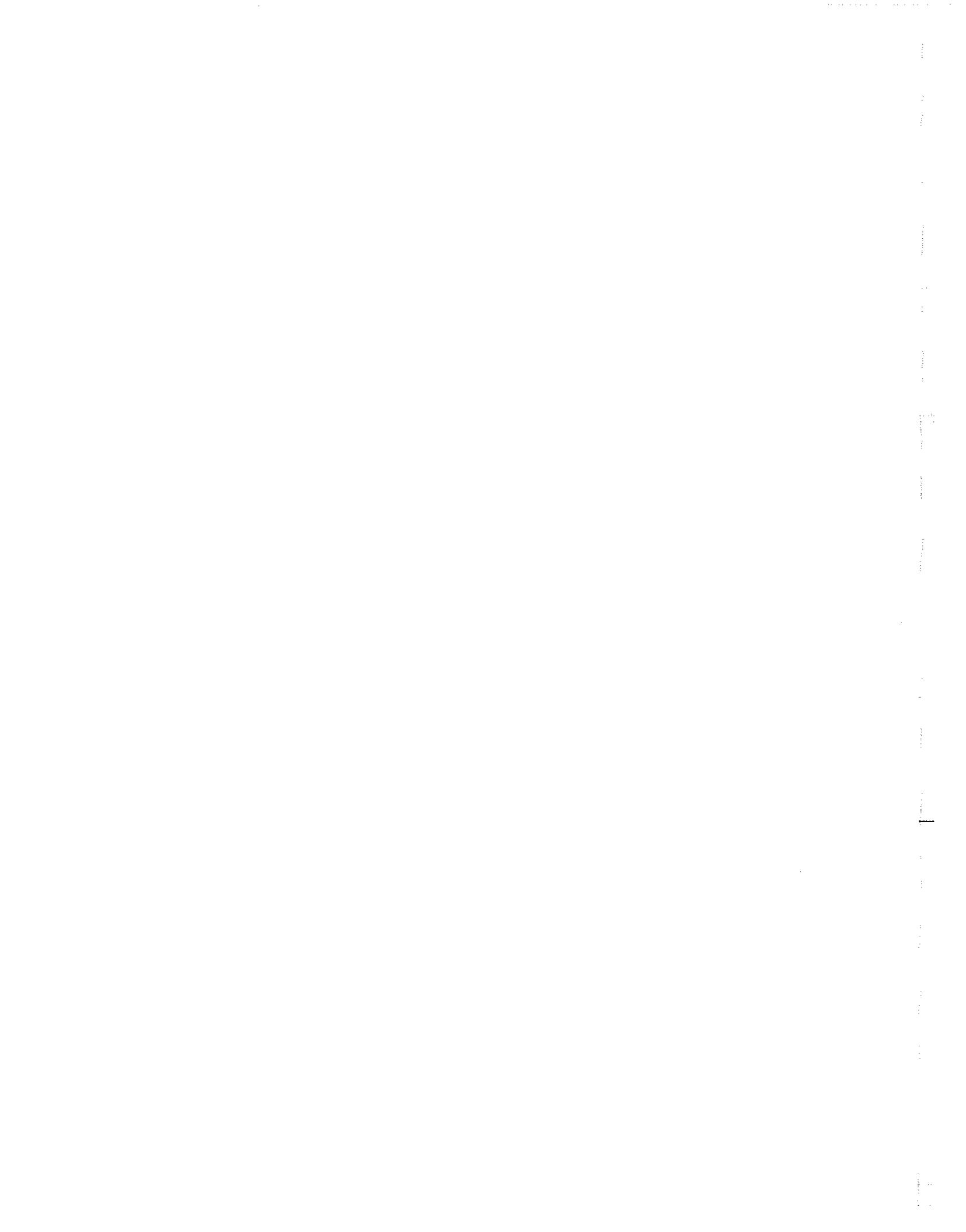


LCP RESUBMITTAL #8



**LCP RESUBMITTAL AREA
VICINITY MAP**

Figure 2-II



is allowed through it to the Nature Interpretive Center. Instead, a shuttle bus system, which picks up passengers at the corner of "E" Street and Bay Boulevard every 20 minutes, transports people to the Center to view the surrounding resources.

As indicated above, the Chula Vista Nature Interpretive Center is also located within the project area, and consists of three acres with interpretive facilities which focus on the resources of the surrounding estuarine and wetland environments. Other developed areas within the site include limited manufacturing and commercial facilities located in the southeast and eastern portions, near the railroad tracks and I-5.

The ownership of the northern portion of the project area is shown on Figure 2-III, and is dominated by the USFWS's recently established NWR as discussed above. As described under Project Objectives, below, physical changes are proposed only to the privately-owned portion of the Resubmittal area. Future development would therefore depend on the actions of the property owners, Chula Vista Investors, the City of Chula Vista Redevelopment Agency and Rohr Industries.

2.2 PROJECT OBJECTIVES

Chula Vista Investors, the applicant, is proposing a resubmittal of the City of Chula Vista's certified Local Coastal Program (LCP). Additionally, the City of Chula Vista is redesignating "D" Street Fill and Gunpowder Point from residential and commercial uses allowed under the existing certified LCP, to open space, which is consistent with the recent establishment of the NWR. EIRs are not required to be prepared by local governments for the preparation and adoption of LCPs; however, certification of an LCP by the Coastal Commission is subject to the requirements of the California Environmental Quality Act (Section 21080.9). The Secretary of Resources, in his memorandum dated October 9, 1987, expressed the opinion that the provisions in Section 21080.9 require the California Coastal Commission to comply with CEQA requirements during both the initial certification of LCPs and the subsequent certification of LCP resubmittals. Thus, in an effort to streamline the LCP resubmittal certification process, the applicant has agreed to have CEQA review undertaken prior to local action on the proposed LCPR No. 8.

The proposed LCPR No. 8 primarily would involve modifications to the arrangement of land uses, building height controls, and development intensity and siting as shown in the new Subarea 1 (Midbayfront) of the LCPR No. 8. In addition to the LCP Resubmittal, the City of Chula Vista's Bayfront Specific Plan (which implements the LCP) would thus also need to be modified. Additionally, the General Plan (Update) designations would be changed, requiring the General Plan Amendment mentioned above. The City's Redevelopment Plan for this area also requires an amendment.

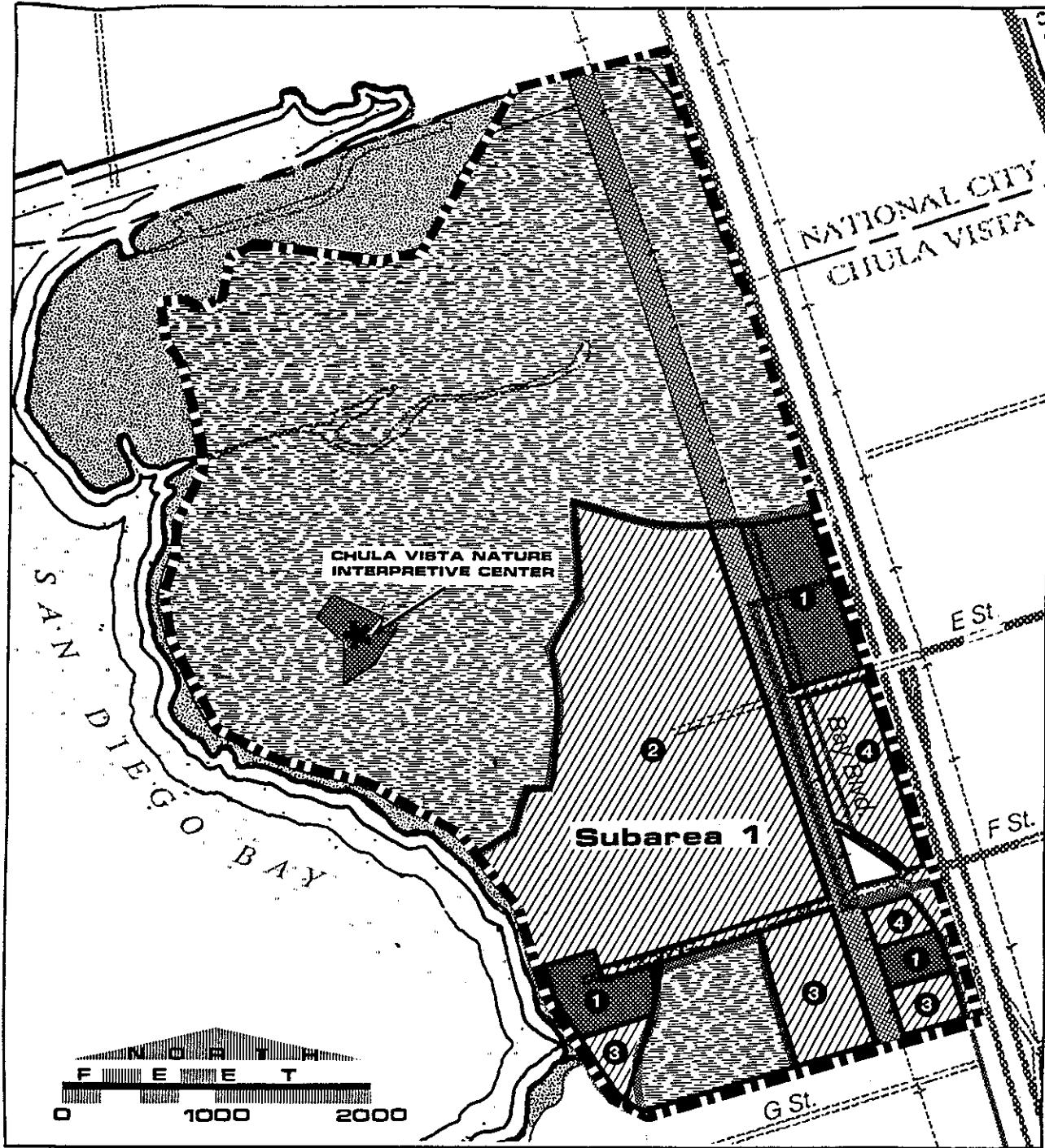
2.3 DESCRIPTION OF PROJECT AND ALTERNATIVES

Proposed Project

As previously stated, the project is the resubmittal of the LCP, ~~which will for the Chula Vista Coastal Zone which encompasses approximately 790 acres. The resubmittal of the~~



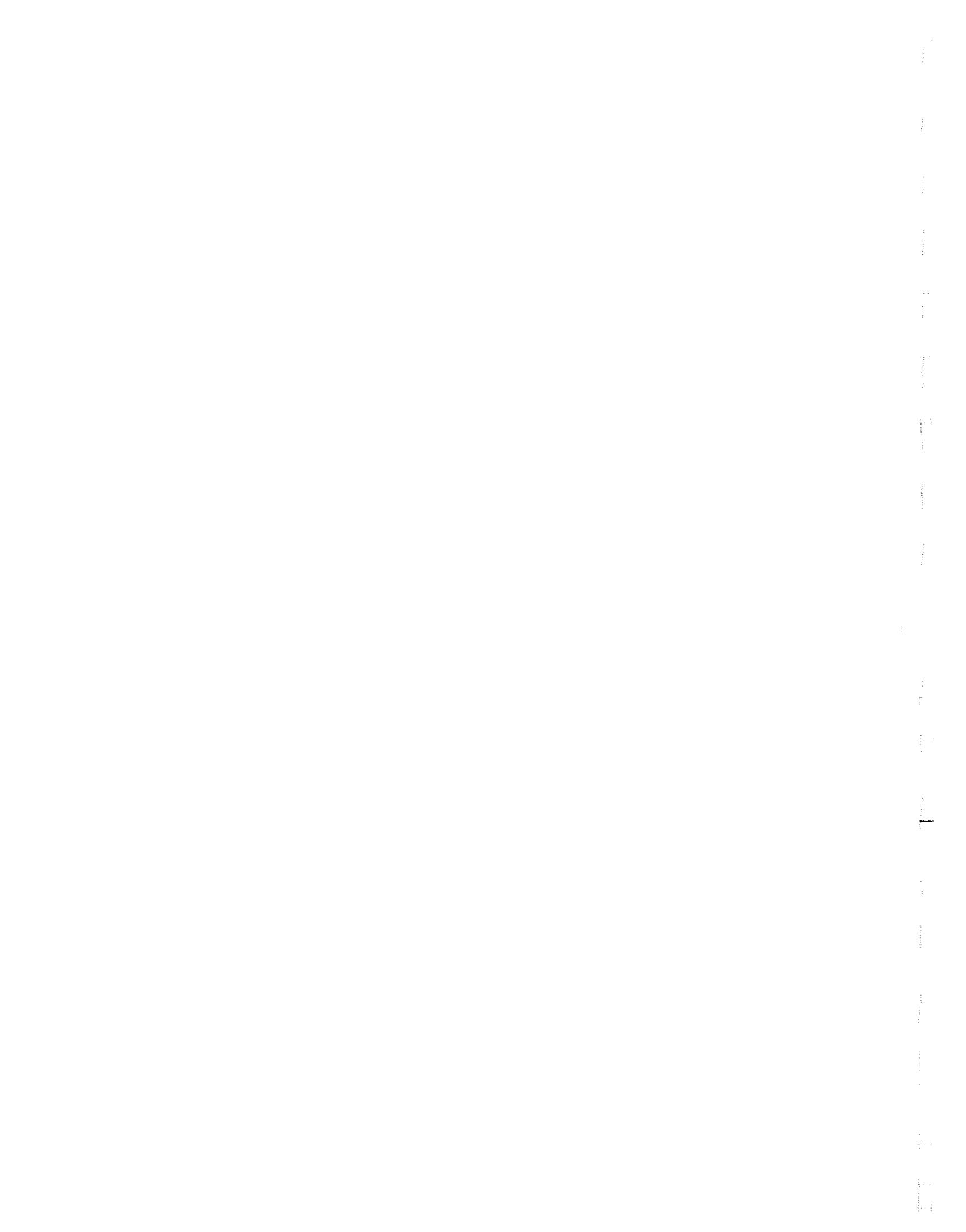
LCP RESUBMITTAL #8



- | | | | |
|--------------|--|--|--------------------------------------|
| | U.S. Fish & Wildlife Service | | SDG&E |
| | San Diego Unified Port District | | Private Property |
| | City of Chula Vista | | |
| ① | City of Chula Vista Redevelopment Agency | | ② Chula Vista Investors |
| ----- | LCP Resubmittal Boundary | | ③ Rohr Industries |
| * | The NIC is located on an easement from the U.S. Fish & Wildlife Service | | ④ Other Private Ownership |

LAND OWNERSHIP

Figure 2-III



LCP consists of changes to the land uses in the text and on the maps of the LCP. The LCPR No. 8 text is included in Appendix B and is available at the City of Chula Vista Community Development Department for review. The proposed LCPR No. 8 text and maps would serve as the new LCP, essentially replacing the text of the original certified LCP (1985). Chula Vista's General Plan (Update 1989), and Redevelopment Plan (adopted 1974), would also be changed to reflect the changes to the LCP. These changes to the LCP, General Plan and Redevelopment Plan are all changes to text and maps in each of these plans. Thus, in order to evaluate environmental impacts from this "project," not only the LCPR No. 8 text will be reviewed, but the future development allowed by LCPR No. 8 will also be used as the ultimate "project" action and the affected plans will be reviewed for consistency with the proposed LCPR No. 8.

Two major changes would occur with approval of LCPR No. 8. The first is the redesignation to "open space" on all City plans for the "D" Street Fill and Gunpowder Point. The establishment of the NWR permits only open space in these areas rather than the commercial and other uses currently allowed by the LCP. The second is the change to the Midbayfront (Subarea 1) which would permit new uses, as well as more intense levels of existing land uses in this area than are allowed in the current LCP. As previously mentioned, the EIR focuses the analysis on impacts resulting from this second change. Chula Vista Investors have proposed a Development Plan for this subarea, shown on Figure 2-IV, which is used in this EIR for evaluation of future potential environmental impacts from development.

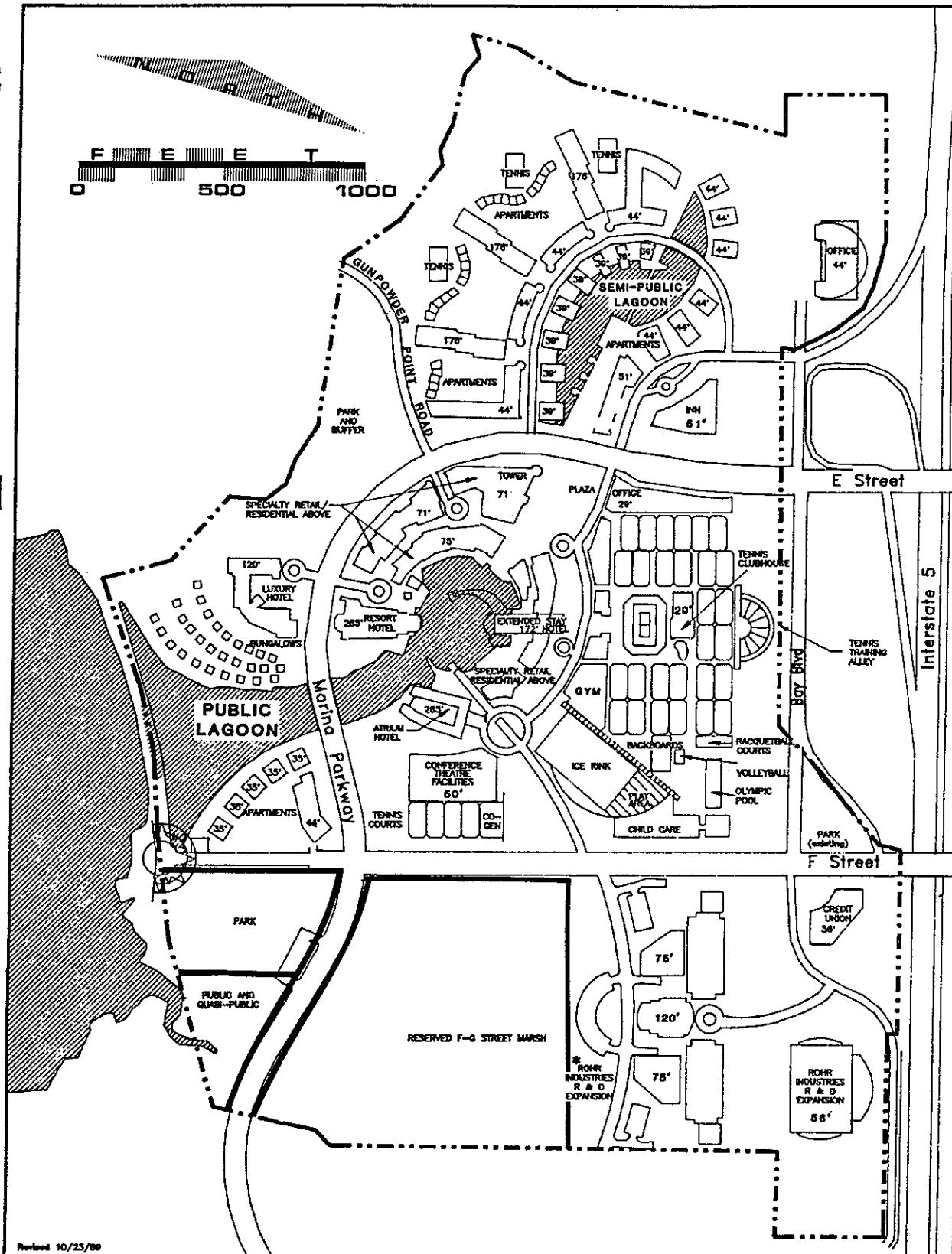
Figures 2-IV and 2-V show the land use categories proposed for the Midbayfront. Figure 2-IV relates to the Midbayfront Development Plan and Figure 2-V is the Land Use Element of the proposed LCPR No. 8. As shown, the categories include commercial, industrial, residential, public and quasi public, and parks and recreation areas. The existing certified LCP Land Use Element is shown on Figure 2-VI. A comparison of the proposed Land Use Element with the existing Land Use Element shows that the changes to the Element all occur in the Midbayfront area.

The Midbayfront (Subarea 1) covers approximately 135 acres. The Development Plan for this area shows that the outer edges of the north and west sides of the project area would consist of parks and part of a man-made lagoon. The 10-acre lagoon would be salt water, would not connect with San Diego Bay, and would extend into the central portion of the area. The parks and this lagoon would be made available for public use, as well as for resident and visitor use. Intermixed throughout the remainder of the project area would be high-rise hotels (120 to 265 feet high), high-rise apartments (up to 176 feet high), a 2.6 acre semi-public lagoon to serve apartment dwellers and restaurant users north of "E" Street, one- and two-story apartments and bungalow type hotel units, retail shops, restaurants, offices, a co-generation facility, and a conference center, as well as athletic facilities including a tennis complex, swimming facility and an ice rink.

Wetland setbacks would occur along the perimeter of the Midbayfront which is adjacent to both the bay and the NWR. The LCPR No. 8 text (Figure 2.3 of the LCPR No. 8 text) shows the following limitations within these setbacks:



LCP RESUBMITTAL #8



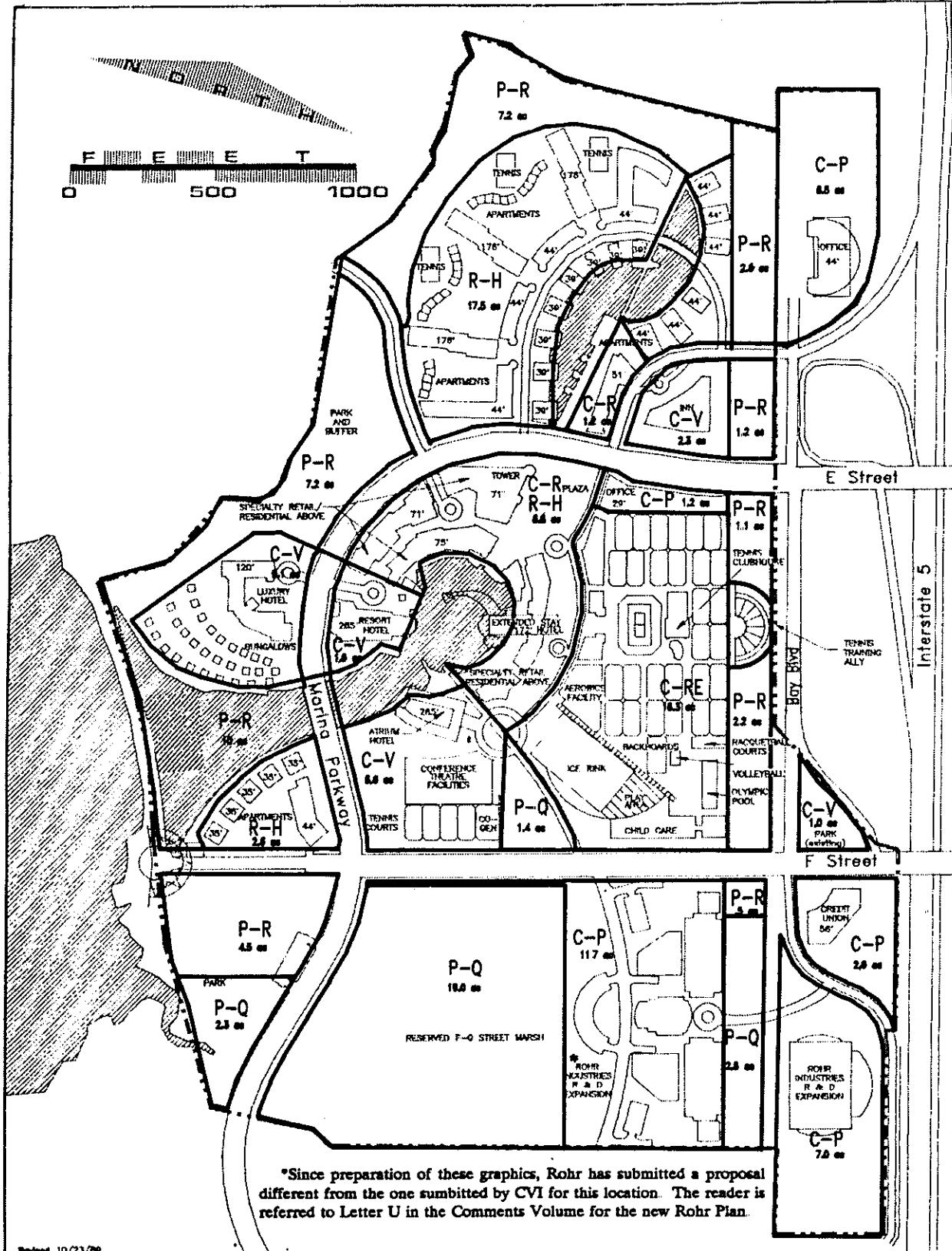
*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

PROPOSED DEVELOPMENT PLAN

Figure 2-IV



L O C P R E S U B M I T T A L # 8



Revised 10/23/86

C-P Commercial Professional

C-R Commercial Retail

C-V Commercial Visitor

C-RE Commercial Recreational

R-H Residential High Density

P-R Parks and Recreation

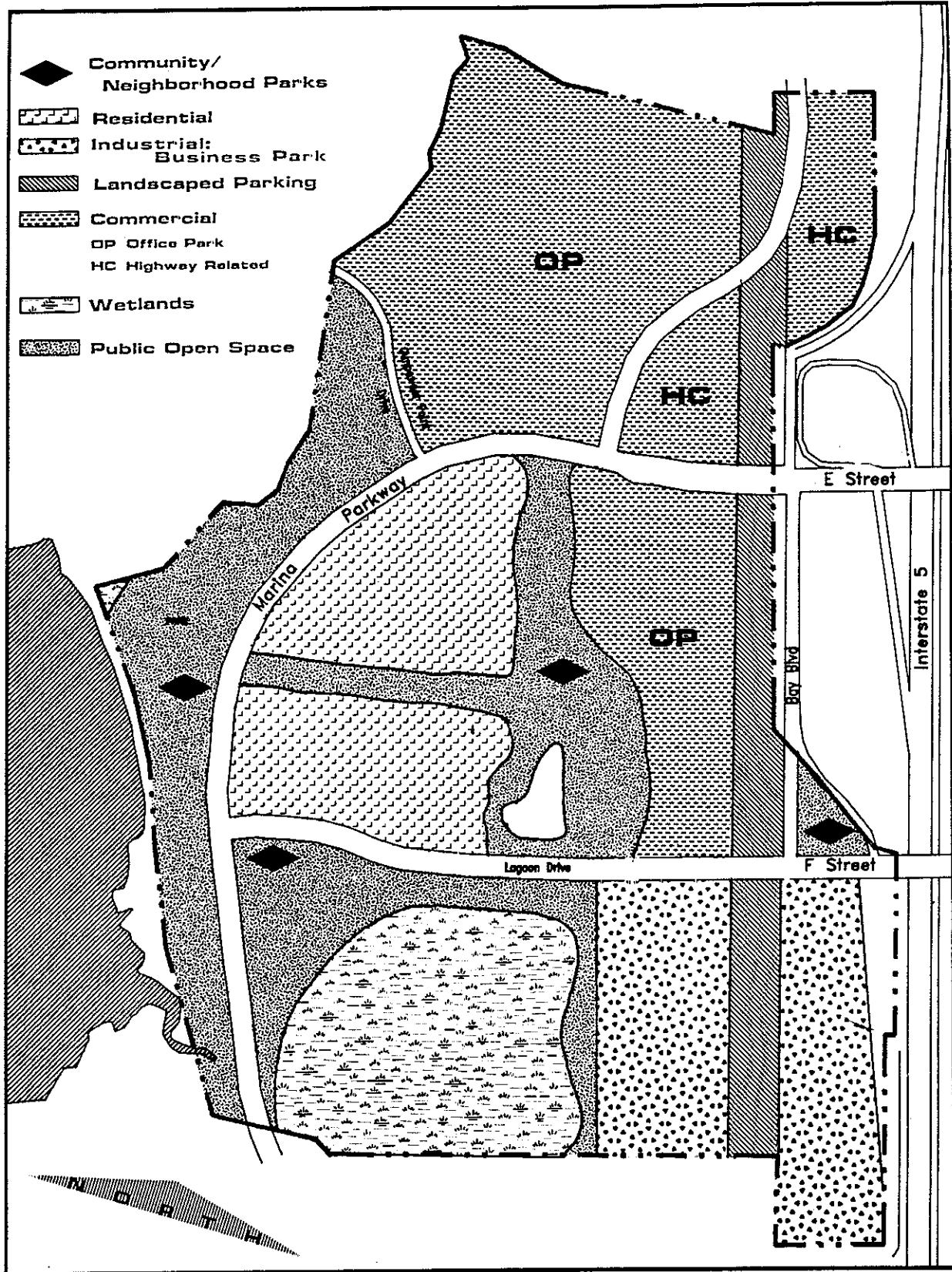
P-Q Guest-Public

PROPOSED
LAND USE DESIGNATIONS

Figure 2-V



LCP SUBMITTAL #8



F E E T
0 500 1000

**EXISTING
LCP LAND USE ELEMENTS**

Figure 2-VI



| <u>Setback</u> | <u>Location</u> | <u>Use Allowed</u> |
|-----------------|---|--|
| Wetlands Buffer | 100 feet from property line in toward NWR. | No uses allowed - open space. |
| Primary Zone | 100 feet from property line in toward development. | Property line - 50' - No public access. 50'-100' - Park pavilions, bicycle paths, pedestrian paths. |
| Secondary Zone | 100 feet from primary zone in toward development. | Low-rise buildings, some mid-rise buildings (low-rise equivalent to 6-stories or 60'; mid-rise equivalent to 7 to 12 stories or up to 130'). |
| Tertiary Zone | 100 feet from secondary zone in toward development. | Low-rise buildings, mid-rise buildings, some high-rise buildings (high-rise equivalent to 13 to 26 stories or up to 265'). |

The LCPR No. 8 (1990) II-105 through II-108) also identifies wetland and habitat restoration measures. These include:

(1) Proposed restoration by upland conversion to wetland

At the "F-G" Street site, upland conversion to wetland shall be provided at three locations:

- (a) Upland conversion to provide at least 3.5 acres of year-round freshwater marsh along the east and northeast margins of the site. This freshwater marsh replaces the roughly 3.2 acres of degraded seasonal wetland that will be removed for construction of the desiltation basin.
- (b) Upland conversion to provide at least 2.3 acres of salt marsh, primarily along the west and north-central margins of the existing salt marsh, thus expanding the "F-G" Street salt marsh.
- (c) Upland conversion to provide at least 1.7 acres of salt marsh immediately west of Marina Parkway, thus extending the "F-G" Street salt marsh to connect directly with San Diego Bay.

(2) Proposed enhancement of existing habitat

At the "F-G" Street site, existing habitat shall be enhanced at three locations as follows:

- (a) Upgrade at least 0.5 acres of degraded high marsh along the east margin of the "F-G" Street salt marsh.
- (b) Upgrade at least 0.5 acres of degraded coastal sage scrub bordering the south margin of the "F-G" Street Marsh.

- (c) Provide new coastal sage habitat (or upgrade existing severely degraded coastal sage scrub habitat) totaling at 2.0 acres along selected upland margin of the "F-G" Street site and the extension west of Marina Parkway.

(3) Proposed enhancement of water quality

In order to enhance the quality of wetland habitat at the "F-G" Street site, the supply of water to the site shall be enhanced by the following:

- (a) Improve quality of upland storm water runoff by construction and operation of a desilting basin of approximately 9.5 acre feet capacity, located on north side of Lagoon Drive.
- (b) Improve access of tidal waters to the "F-G" Street salt marsh by increasing the number and size of culverts under the adjoining roadway (i.e., Marina Parkway).

(4) Other proposed enhancement features/sections

Other proposed enhancement features and actions that shall be provided at or adjoining the "F-G" Street site are:

- (a) enhancement of habitat quality and wildlife value by
- i) providing perimeter fencing to control human access, and
 - ii) screening the marsh from street-level view (except at selected pedestrian viewpoints) by massed plantings of coastal sage scrub in association with the perimeter fencing.

To ensure an orderly and efficient implementation of the various restoration and enhancement features and actions specified above, a comprehensive Habitat Restoration Plan would be prepared and approved prior to initiation of development.

The Habitat Restoration Plan would address in detail the following considerations associated with implementing the specified restoration and enhancement work as well as the long term management of the areas restored or enhanced:

- (1) Engineering design, grading plan, and cost analysis.
- (2) Vegetation design, including specifications for planting program, source of plants, etc.
- (3) Implementation schedule and phasing.

(4) Management program.

(5) Monitoring program.

(6) Maintenance program.

(7) Funding arrangements: implementation, monitoring, and maintenance.

(8) Contractual agreements.

(9) Ownership transfer where appropriate.

Preparation of the Habitat Restoration Plan would involve participation by the Developer, the City of Chula Vista, the California Coastal Commission, the U.S. Fish & Wildlife Service, and other resource management agencies.

The total proposed development shown in the Development Plan would consist of approximately 4.2 million square feet (s.f.) of building space. The existing approved LCP currently allows 1.9 to 2.5 million s.f. of building space in the Midbayfront. Thus the proposed building space is approximately 1.7 million s.f. greater than the current maximum allowable density in the Midbayfront area. Additionally, the height of many of the buildings exceeds the height allowed by this certified LCP.

The developer proposes traffic improvements as part of the project. These improvements include:

1. Restripe the "E" Street overpass to provide two through lanes per direction, and two left-turn lanes from eastbound "E" Street to I-5.
2. Widen the northbound I-5 on-ramp at "E" Street to accommodate the dual left-turn lanes from eastbound "E" Street to this ramp.
3. Widen westbound "E" Street from the northbound I-5 on-ramp to provide a separate right-turn lane from westbound "E" Street to this I-5 ramp.
4. Restripe the I-5 northbound off-ramp at "E" Street to provide an exclusive left-turn lane and a shared left- and right-turn lane.
5. Construct I-5 southbound off-ramp with four lanes to "E" Street/Marina Parkway. Additionally, provide a loop ramp for westbound "E" Street traffic to access southbound I-5.

Alternatives

Seven Nine alternatives are evaluated in the EIR, and four five of these, numbers 2, 3, 4, and 5 and 3 are evaluated in the same level of detail as the Development Plan. The alternatives focus on the Midbayfront portion of the project area, where adoption of the



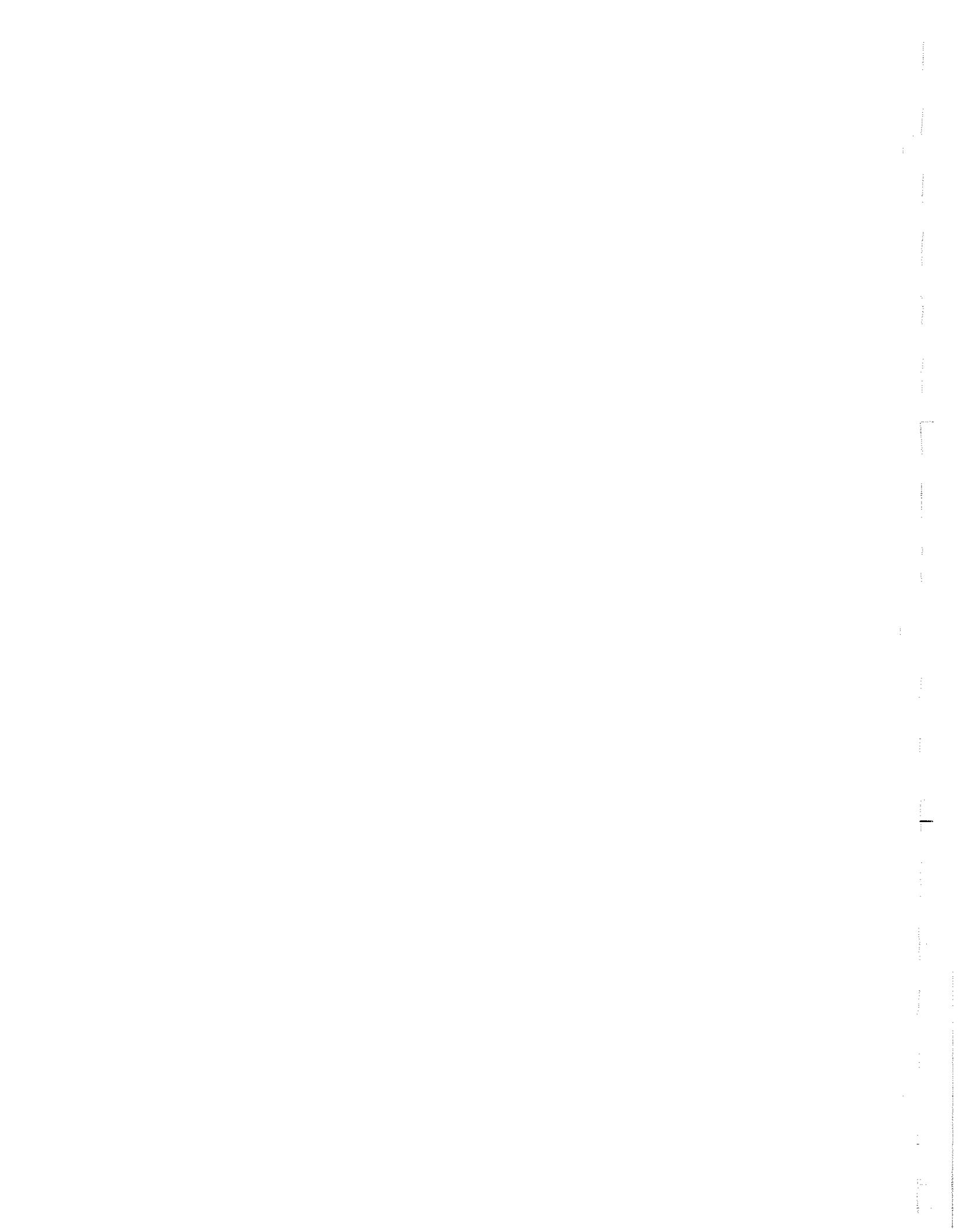
proposed LCPR No. 8 and Development Plan would result in changes to the existing LCP. The alternatives are listed below.

1. No Project
2. Development Under the Existing Certified LCP
3. Reduced Density 1
Mid-Range Alternative
(26 percent density decrease from developer's proposal)
4. Reduced Density 1A
(26 percent density decrease, Slightly Different Land Use Pattern)
5. Reduced Density 2
Within Intensity Range of Existing Midbayfront Land Uses (47 percent density decrease from developer's proposal)
6. Possible Locational Alternatives
7. Reduced Density 3, Modified Design
8. Applicant's Revised Development Plan
9. Alternative Developed in Response to Public Comments

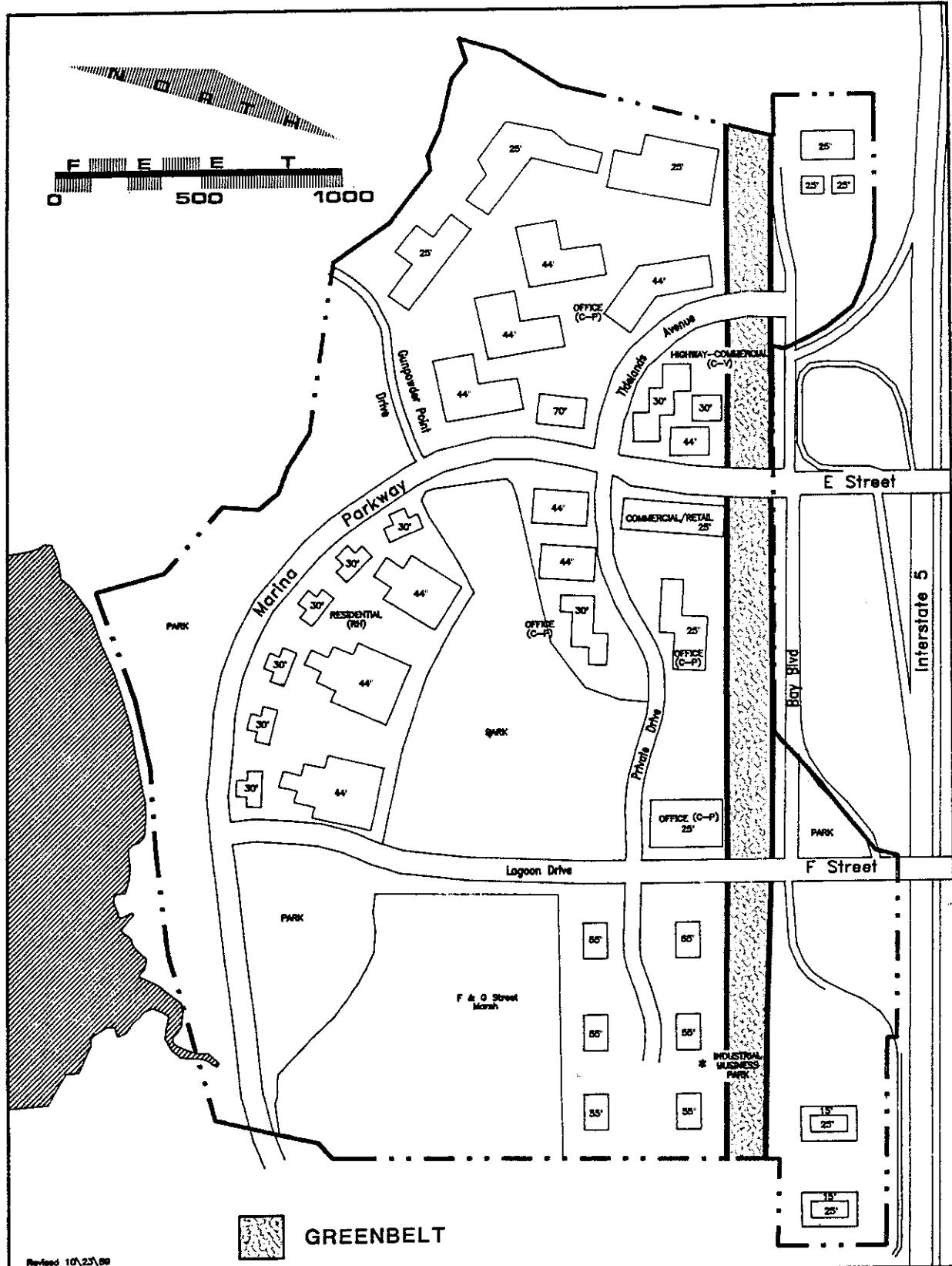
Alternatives 1 and 2 are the "no project" alternatives. The first considers leaving the site as it presently exists, which includes a marine business at the southwest corner, and the Rohr buildings as they currently exist. No changes would occur. The second envisions development on the site as allowed under the existing certified LCP (see Figure 2-VII). Alternatives 3 and 4 (Figures 2-VIII and 2-IX) envision the same type of mixed use development as proposed by the developer, however, they consider density reductions of 26 percent. Alternative 5 (Figure 2-X) evaluates a 47 percent density reduction for the proposed project. Table 2-1 shows the comparison of the proposed project with these alternatives. Alternative 6 evaluates similar types of projects in different geographical areas, and these are shown on Figure 4-I. These locational alternatives are included in order to evaluate whether the applicant's proposal might result in fewer environmental impacts in a different area. Alternative 7 (Figure 4-VIII) was developed after completion of the initial environmental analysis to avoid the significant impacts associated with the proposed project and other alternatives. Alternatives 8 and 9 were developed after the publication of the Draft EIR. Consequently, these alternatives are discussed in the DEIR, Volume I, Section 4.0, 5.0 and 6.0.

Alternative 1 - No Project - No LCP Resubmittal and No Development

This alternative would leave the site and the LCP as they presently exist; no changes to the LCP and no development would occur. The Midbayfront area currently consists of mostly



CORPORATE SUBMITTAL #8

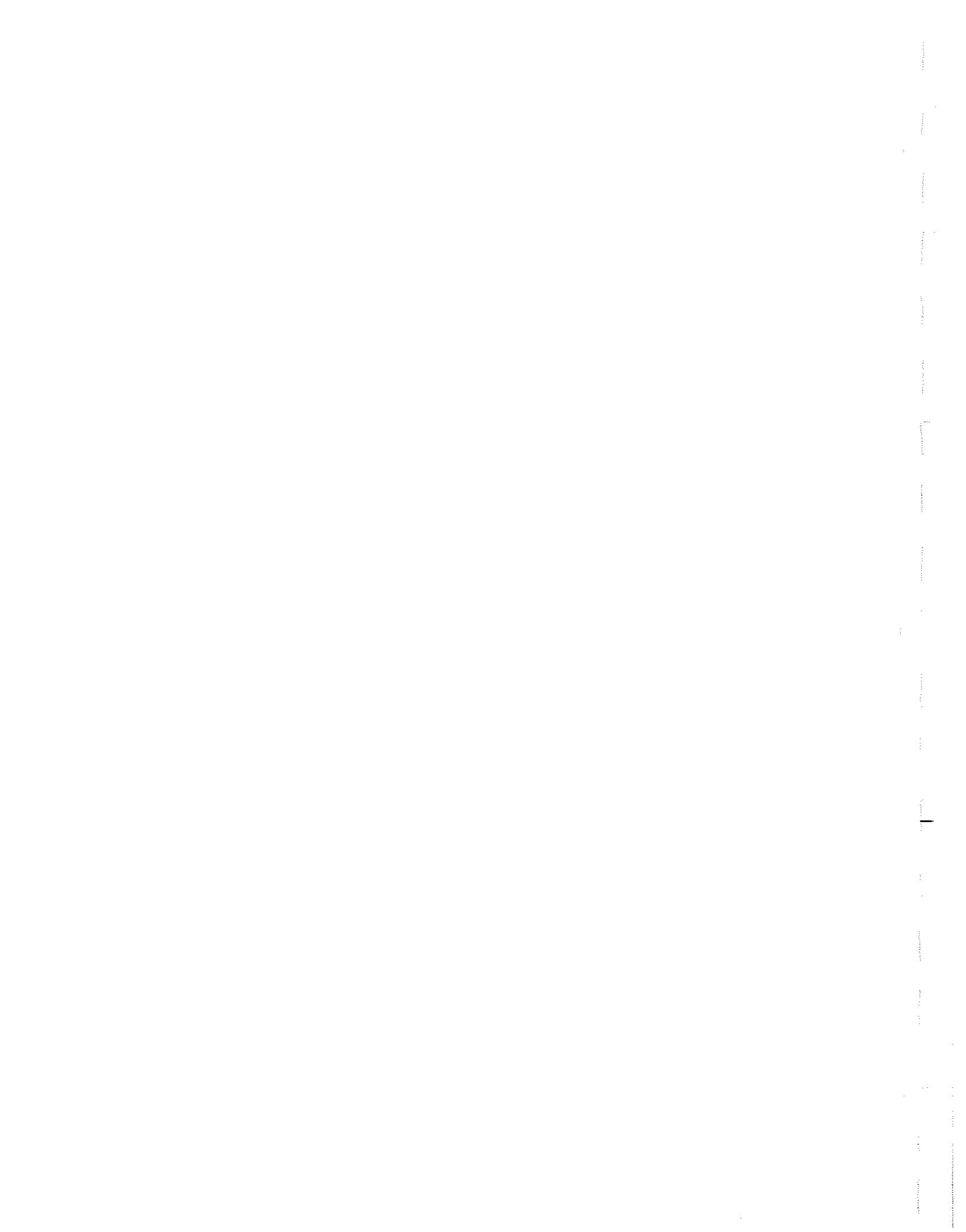


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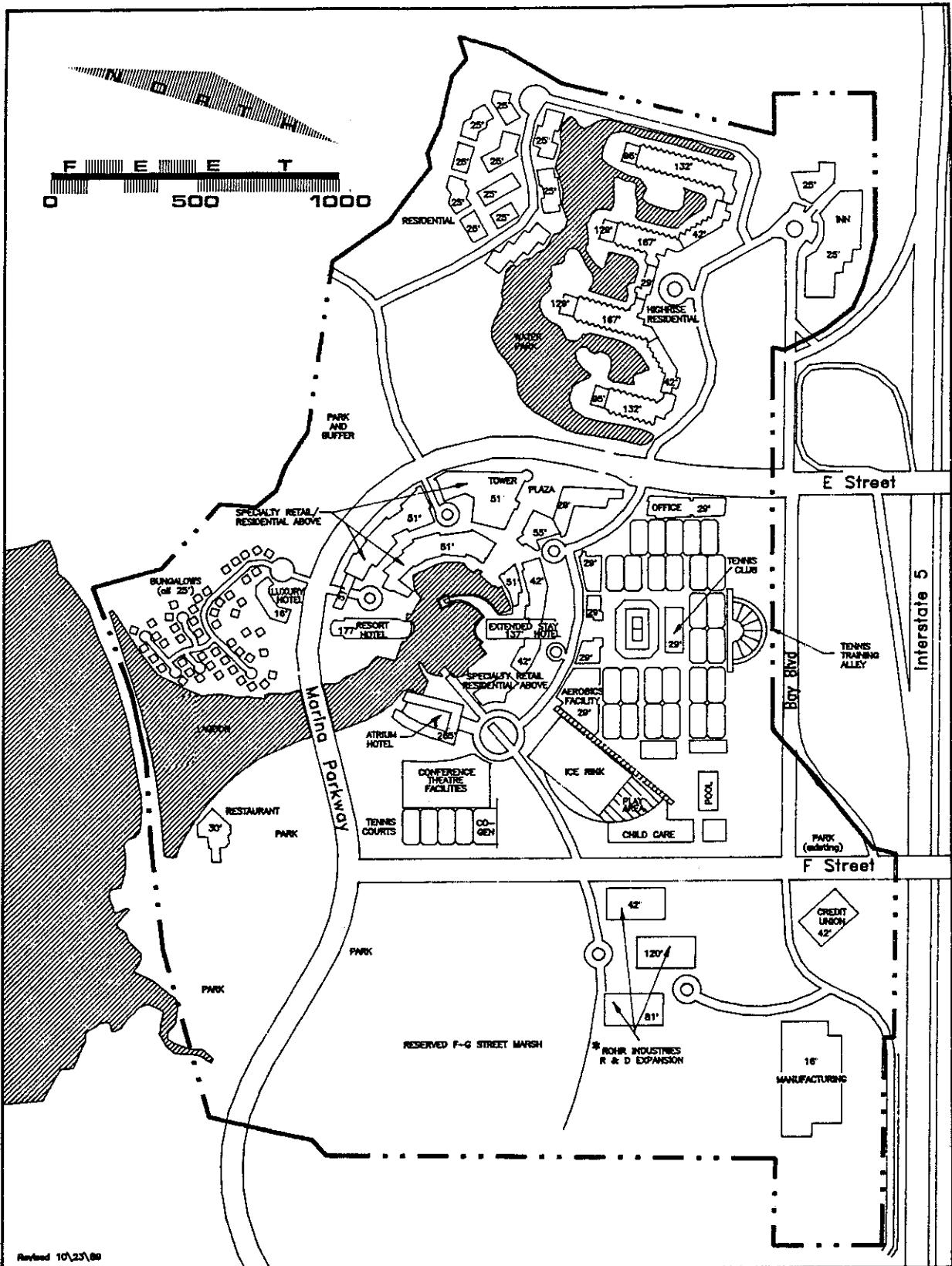
*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

ALTERNATIVE 2
REDUCED DENSITY LDP

Figure 2-VII



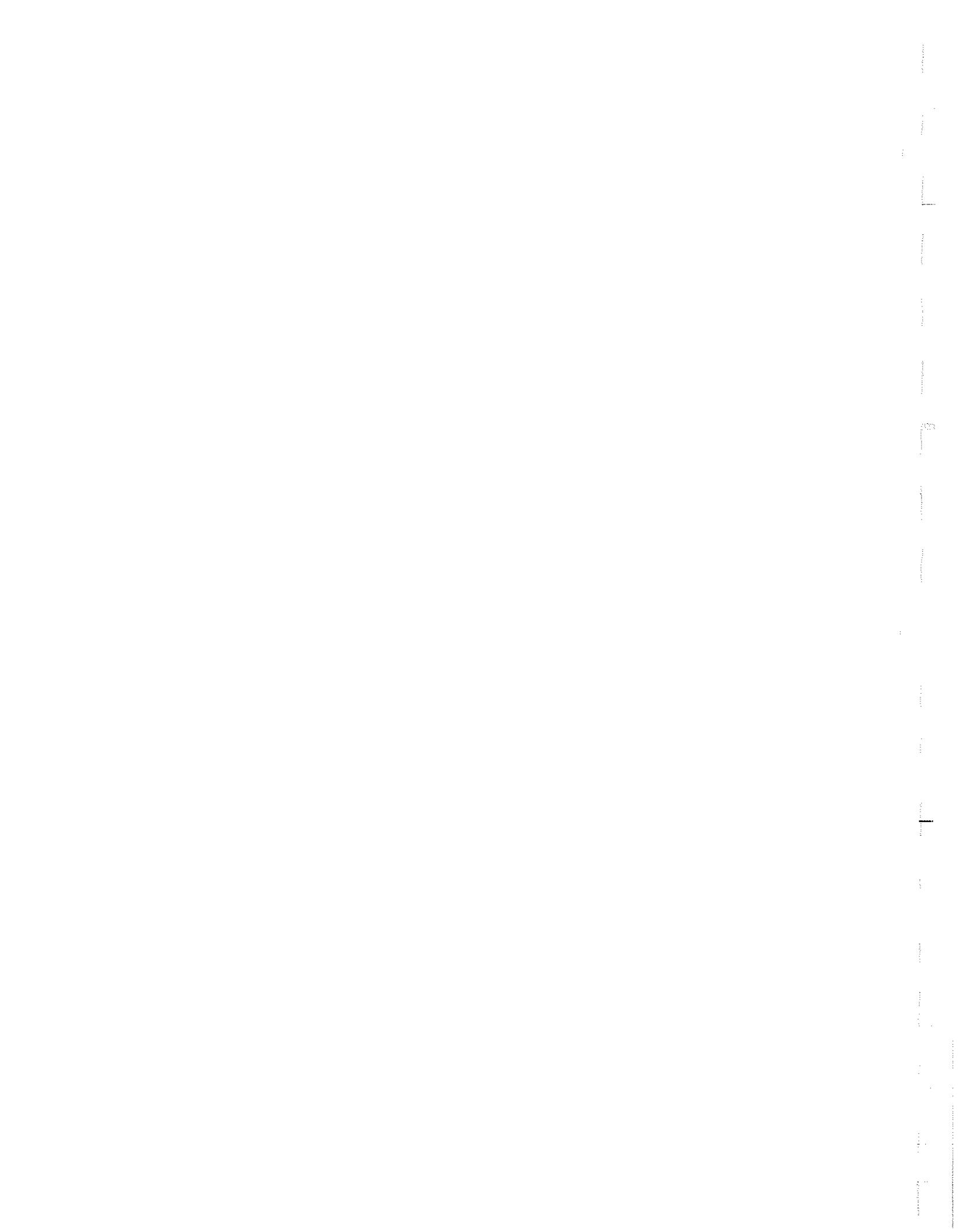
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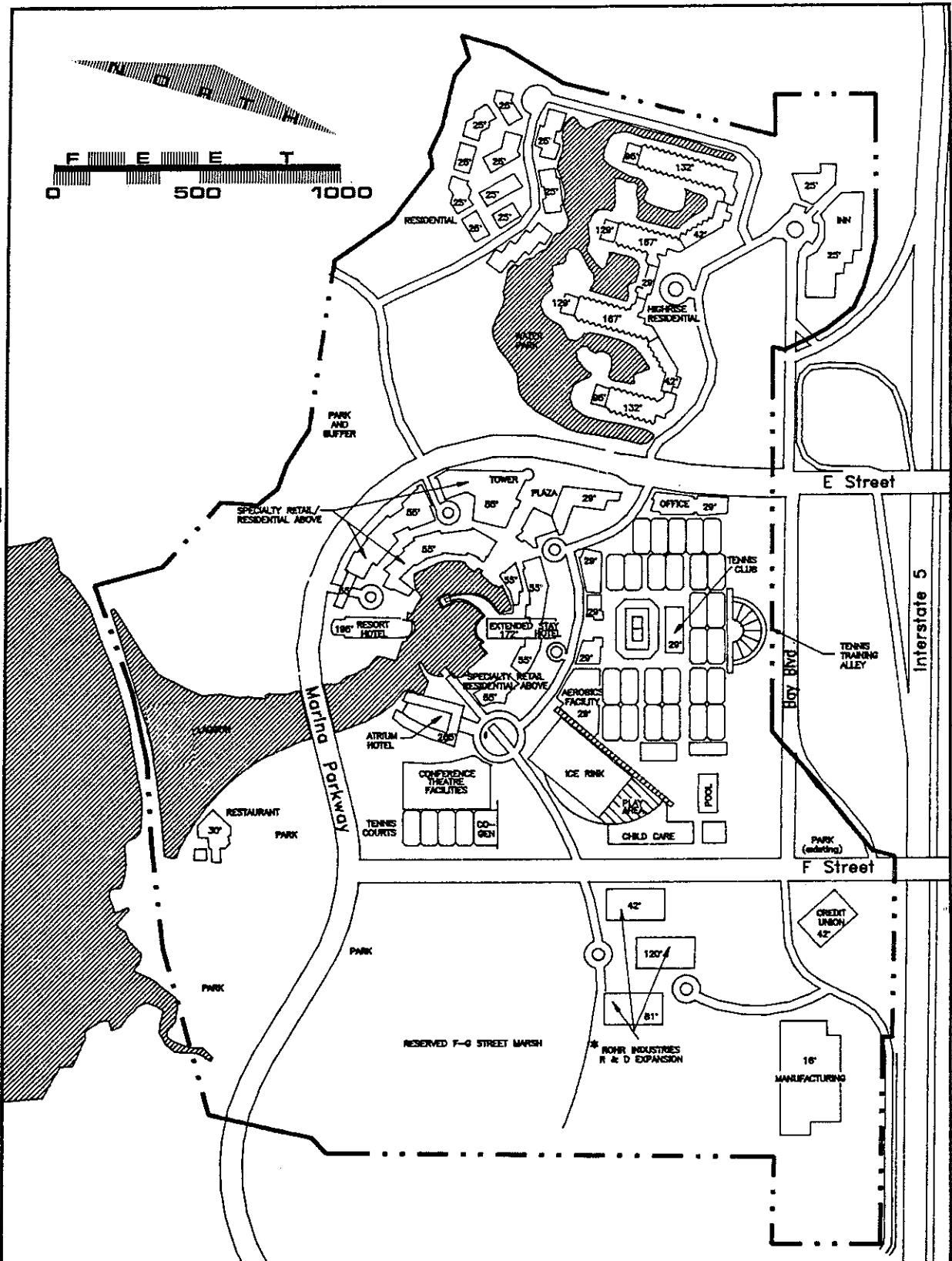
*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

**ALTERNATIVE 3
REDUCED DENSITY 1**

Figure 2-VIII



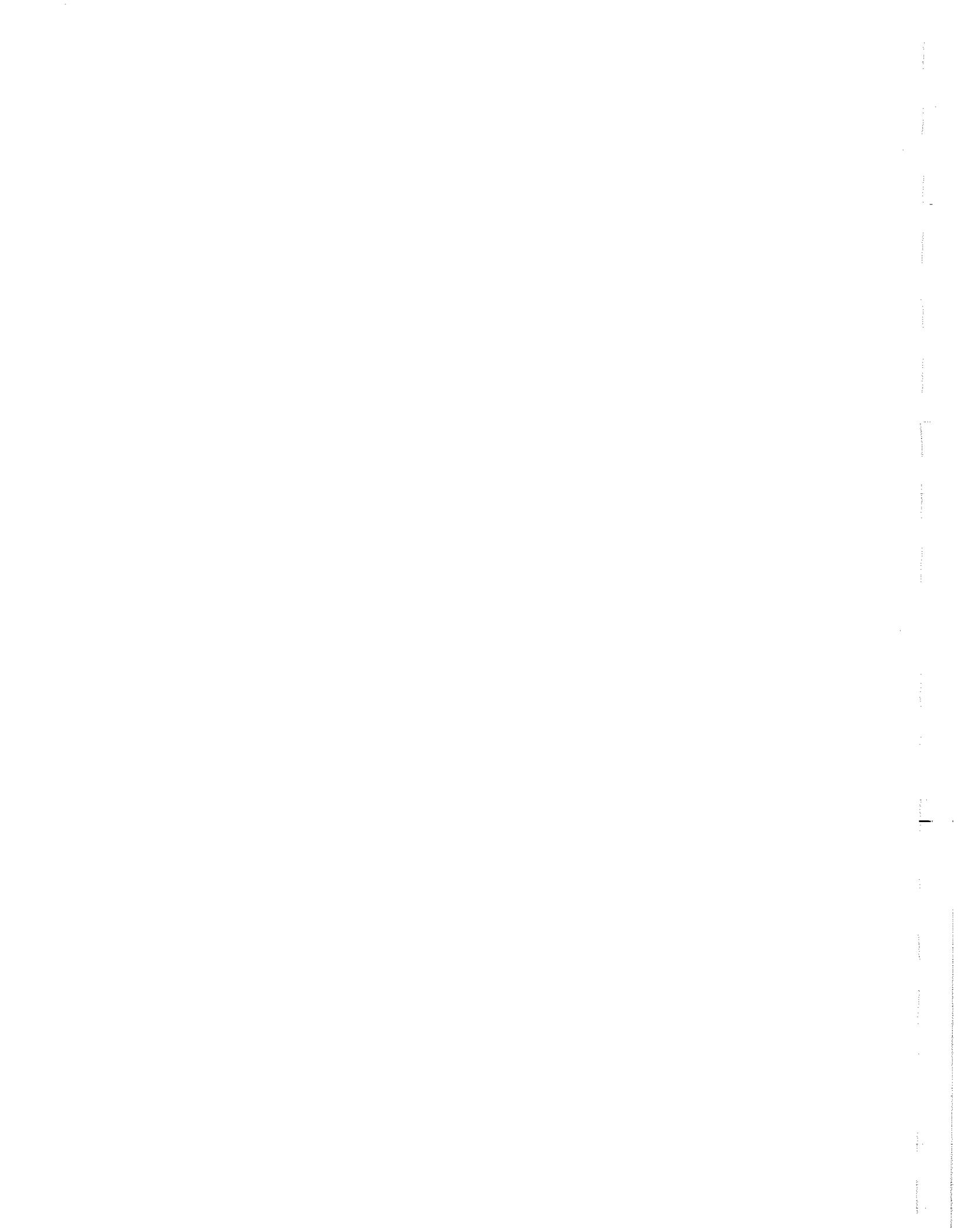
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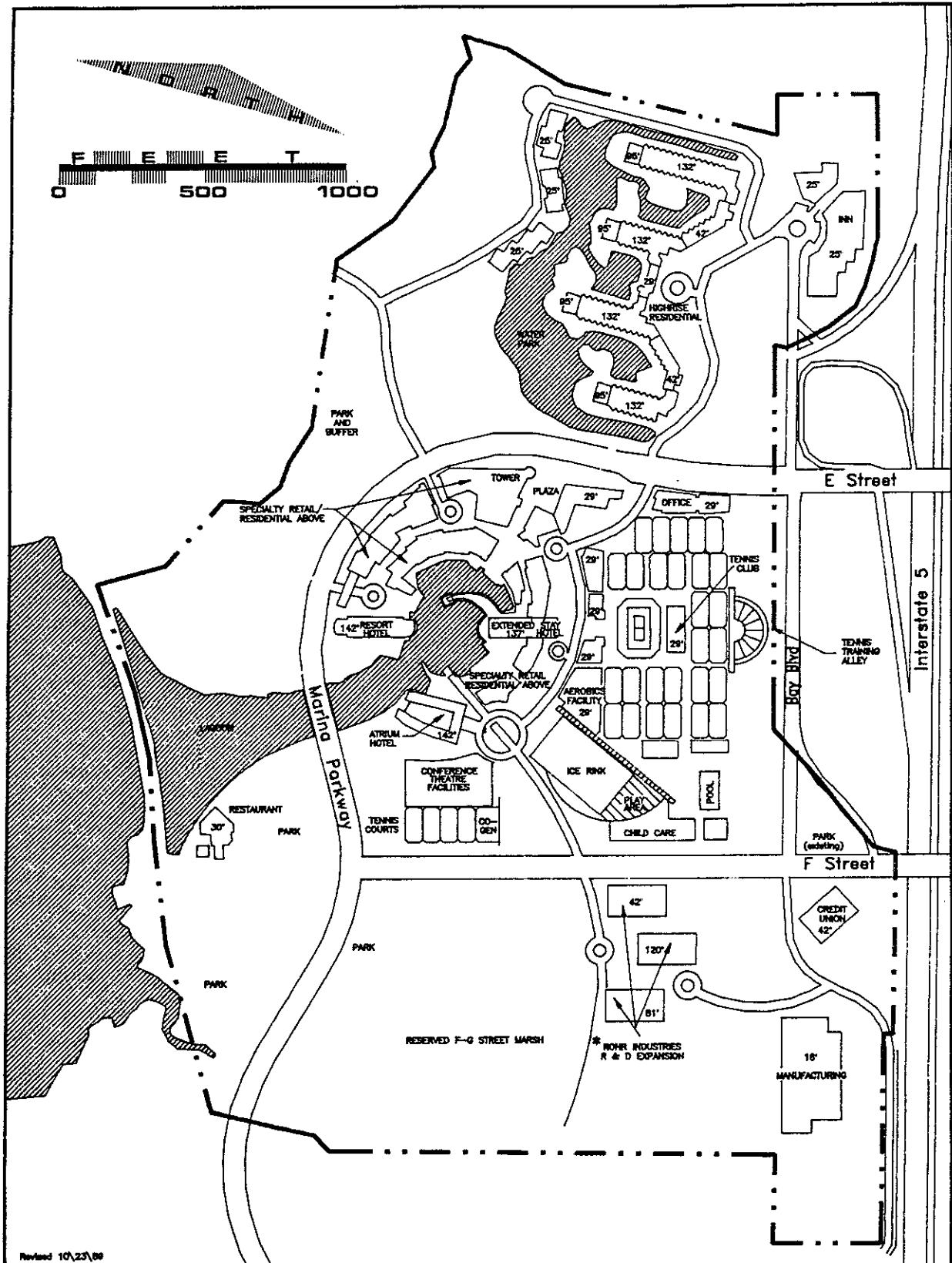
*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

ALTERNATIVE 4 REDUCED DENSITY 1A

Figure 2-IX



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*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

**ALTERNATIVE 5
REDUCED DENSITY E**

Figure 2-X

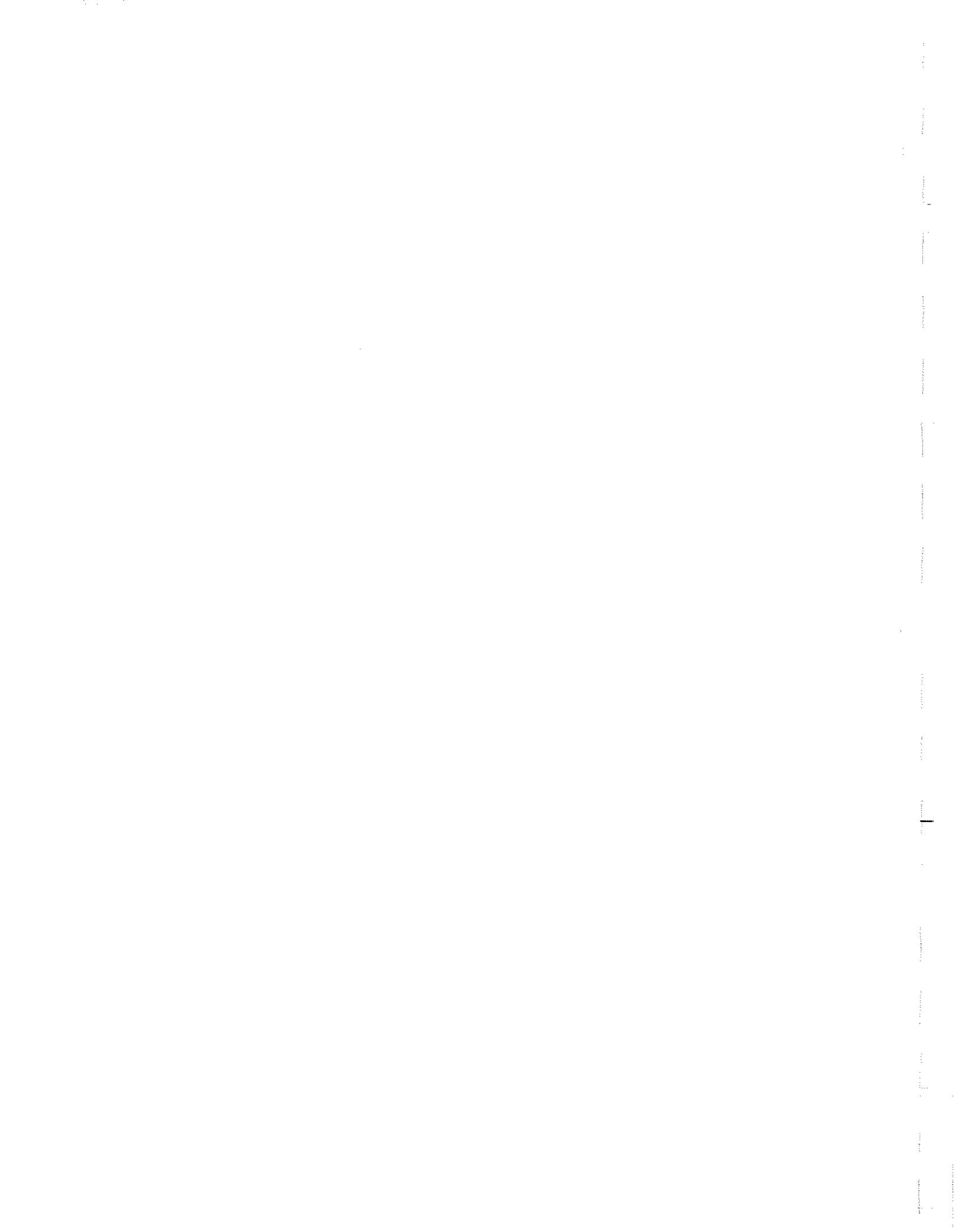
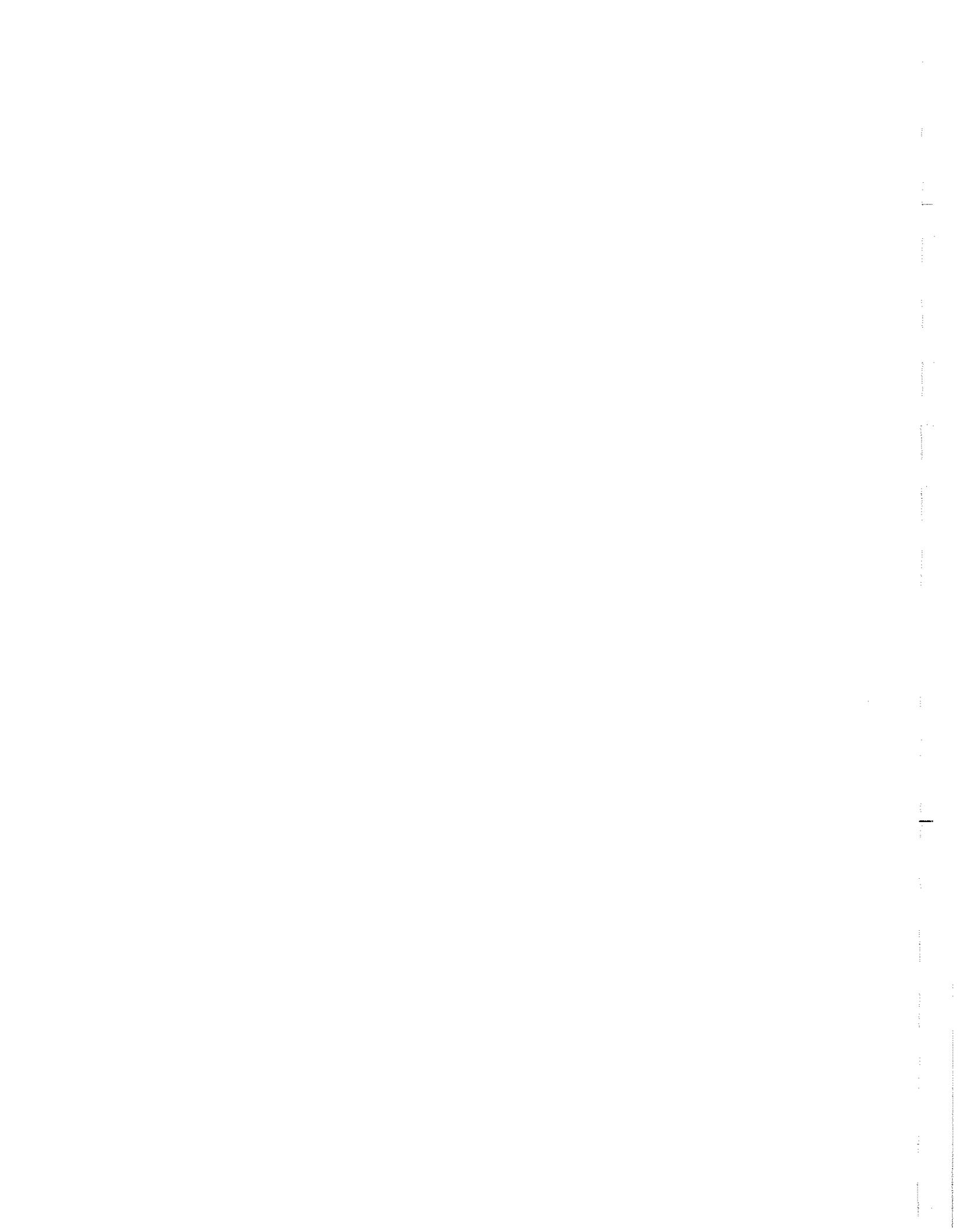


Table 2-1

LCP Resubmittal No. 8 - Alternatives Land Use Comparison

Land Use Categories

| Alternative | Residential (RH) | Commercial | | | Professional/ Administrative (C-P) | Total Square Footage | Public and Quasi-Public** (P-Q) (acres) | Parks*** (P-R) (acres) |
|---|---|---|--------------------------|-------|---|------------------------------------|--|------------------------------|
| | | Visitor (C-V) | Retail (C-R) | | | | | |
| Developer's Proposal | 1,500,000 s.f. (1550 units) | 1,896,000 s.f. (includes 2028 hotel units which total 1,650,000 s.f.)* | 150,000 s.f. | | 640,000 s.f. (including 500,000 s.f. for Rohr) | 4,186,000 | 19.35 25.75 | 18.9 |
| Alternative 1 No Project | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| Alternative 2 (Existing Certified LCP) | 651,528 s.f. (543 units) (-1,007 units totalling 848,472 s.f.)***** | 165,528 s.f. (-1,730,472 s.f.) | 95,832 (-54,168 s.f.) | | 1,335,114 (+695,114) | 2,248,002 | 0 7.6 | 39.6 (+20.7) |
| Alternative 3 Reduced Density i | 1,257,100 s.f. (1300 units) (-250 units totalling 242,900 s.f.) | 1,466,400 s.f. (includes 1550 hotel units) (-528 hotel units totalling 429,600 s.f.) | 150,000 s.f. | | 640,000 s.f. (including 500,000 s.f. for Rohr) | 3,513,500 (-672,500) | 13.25 25.75 | 24.7 (+5.8) |



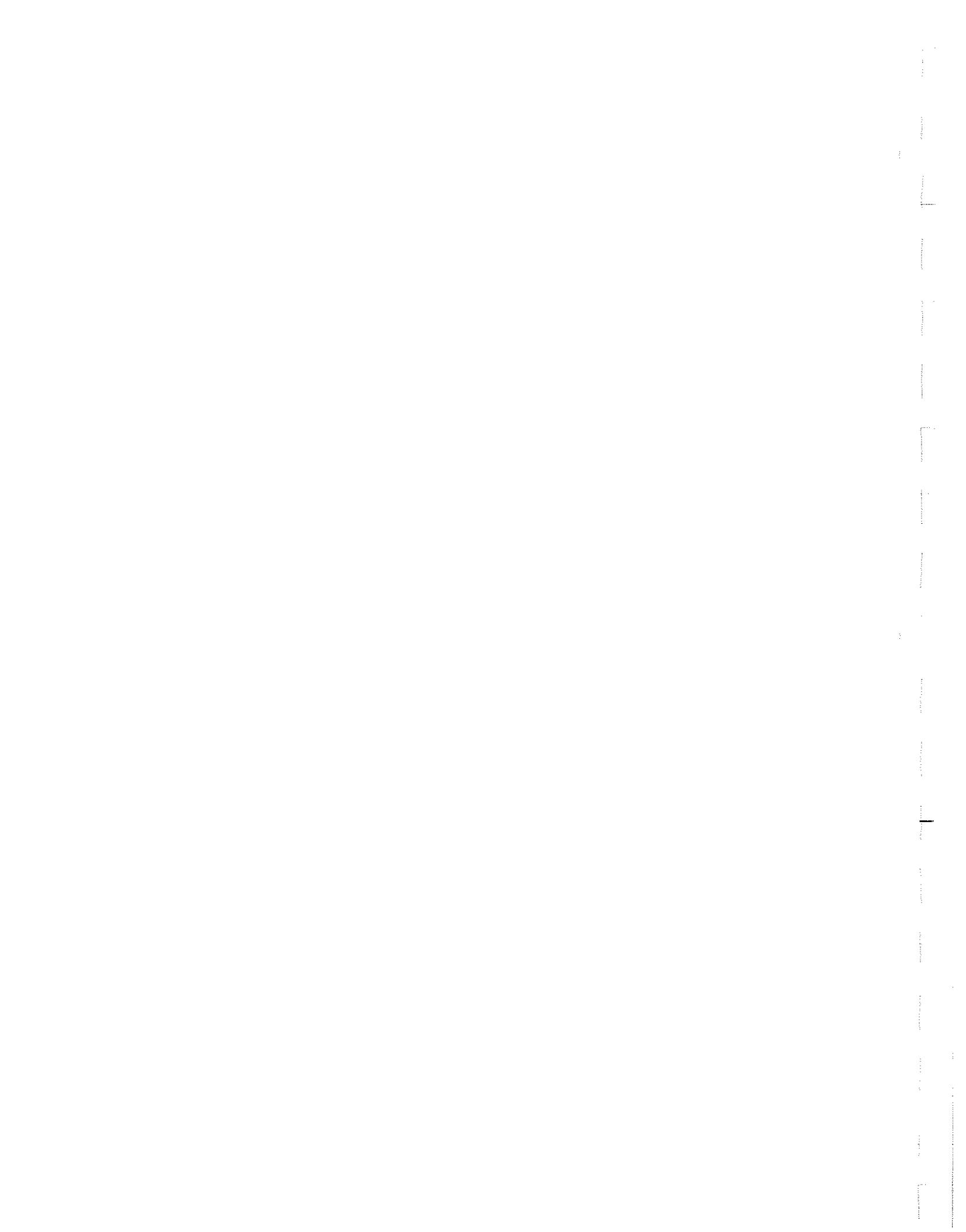
| Alternative | Residential (RH) | Commercial | Commercial | Professional/ Administrative | Total | Public and Quasi-Public** (P-Q) (acres) | Parks*** (P-R) (acres) |
|---|---|---|-----------------------------------|---|-----------------------------------|--|-----------------------------------|
| | | Visitor (C-V) | Retail (C-R) | (C-P) | Square Footage | | |
| Alternative 4 Reduced Density 1A | 1,257,100 s.f. (1300 units) (-250 units totalling 242,900 s.f.) | 1,466,400 s.f. (includes 1550 hotel units) (-528 hotel units totalling 429,600 s.f.) | 150,000 s.f. | 640,000 s.f. (including 500,000 s.f. for Rohr) | 3,513,500 (-672,500) | 13.25 25.75 | 29.8 (+ 10.9) |
| Alternative 5 Reduced Density 2 | 725,250 s.f. (750 units) (-800 units totalling 774,750 s.f.) | 1,059,600 s.f. (includes 1000 hotel units) (1028 hotel units totalling 836,400 s.f.) | 150,000 s.f. | 640,000 s.f. (including 500,000 s.f. for Rohr) | 2,574,850 (-1,611,150) | 13.25 25.75 | 34.8 (+ 15.9) |
| Alternative 6 Locational Alternatives | Similar to proposed project | Similar to proposed project | Similar to proposed project | Similar to proposed project | Similar to proposed project | Similar to proposed project | Similar to proposed project |
| Alternative 7 | Similar to Alternative 5 | Similar to Alternative 5 | Similar to Alternative 5 | Similar to Alternative 5 | Similar to Alternative 5 | Similar to Alternative 5 | Similar to Alternative 5 |

* hotel units calculated at average 813.60 s.f./room.

** includes 7.6 acres of SDG&E transmission corridor easement, 10.0 acres of man-made lagoon (for Proposed Project and Alternatives 3, 4, 5, 0 acres for Alternative 2, 1.54 acres for Alternative 7) (proposed project), 5.1-acres SDG&E transmission corridor easement (Alternatives 3,4,5); and 8.15 acres of athletic facilities for all alternatives except Alternative 2.

*** includes park land only; 10-acre public lagoon also proposed for the project and Alternatives 3, 4, 5 but not included in park acreage; Alternative 7 proposes 15.4 acres public lagoon

**** difference from Applicant's proposal



open space, with a marine-industrial use occurring in the southwest corner of this area. Figure 3-VII in the Land Use section (Section 3.9) shows the Midbayfront and surrounding area uses. The area could be proposed for development under the existing LCP (described under Alternative 2). Thus, this alternative evaluates the condition of "no current development." The detailed evaluation of this alternative is included in Section 4.0.

Alternative 2 - Development under the Existing Certified LCP

This alternative would develop the site consistently with the existing certified LCP. Figure 2-VII and Table 2-1 demonstrate the land uses and the densities allowed by the existing LCP in the Midbayfront. As shown, the existing LCP allows office and business park uses over most of the site, with parks along the southern and western areas, and residential uses concentrated in the west-central portion of the site. Beyond the Midbayfront area, the existing LCP also allows mixed use development in the area of the NWR. Generally, the density of Alternative 2 is substantially lower than that of the proposed project, and has a lesser variety of land uses. Figure 2-VII is an example of a development project which would be consistent with the LCP (this is not an actual proposed project, and the building layout could, of course, be quite different from a project actually proposed). The building heights shown are those allowed by the existing LCP. This alternative would have office uses in the northern and eastern portions of the Midbayfront, residential uses in the central/western portion, and highway-commercial at "E" Street in the eastern portion of the area. Parks would be concentrated in the western and central portions of the site. The density would be approximately 40 percent less than that proposed in the Development Plan.

Alternative 3 - Reduced Density 1

This is the first of the density reduction alternatives in the Midbayfront (Subarea 1) site. Figure 2-VIII and Table 2-1 show the land uses and densities associated with this alternative. The major differences between the proposed project and this alternative are the reduction in density and reconfiguration of the apartment buildings in the northern portion of the site, the elimination of residential uses south of the lagoon to create more park land, and the reduction in heights of the Luxury Hotel, Extended Stay Hotel and Resort Hotel. Otherwise, the development characteristics are the same as those of the proposed development project. The heights of the hotels in the center of the lagoon, even though reduced, are, in the case of the Atrium and Resort Hotel, still inconsistent with the height restrictions of the existing LCP.

Alternative 4 - Reduced Density 1A

In comparison to the proposed project, this second density reduction alternative, shown on Figure 2-IX and Table 2-1, eliminates the Luxury Hotel and bungalows to the north of the lagoon, eliminates residential uses to the south of the lagoon, increases the amount of park land, and decreases the height of the Resort Hotel. Otherwise, the development characteristics are the same as those of the proposed development project. The proposed heights are inconsistent with the existing LCP.

Alternative 5 - Reduced Density 2

The last of the density reduction alternatives, shown on Figure 2-X and Table 2-1, is similar to Alternative 4, however, this alternative has further reductions in residential uses in the northern portion of the site and in height in the northern area apartments as well as in the high rise hotels. Despite reduction, the proposed reduced heights remain inconsistent with the existing LCP, but only by a few feet.

Alternative 6 - Locational Alternatives

These locational alternatives, shown on Figure 4-1, are assessed to determine whether environmental impacts from the applicant's proposed project would be lower at a different site than at the proposed location.

Eight sites were chosen for this assessment, and, upon initial review of the eight, four sites were eliminated due to various constraints. The remaining four sites are evaluated based on the applicant's objectives, the City's objectives, and information contained in existing relevant documents. The assessment criteria and the impact assessment are located in Section 4.0.

Alternative 7 - Reduced Density 3, Modified Design Alternative

Alternative 7 was added at the end of the initial environmental analysis in order to create a project which satisfied the objectives of the proposed project, while avoiding or reducing the potentially significant impacts associated with the proposed project. This alternative description and impact assessment are located in Section 4.0.

2.4 PROJECT PHASING

The Development Plan phasing plan consists of five phases as identified below; the developer has stated that the phasing plan is conceptual, and reserves the right to accelerate any number of phases based on the completion of prior phases and necessary infrastructure (Peterson & Price, June 27, 1990).

| <u>Phase I (1991 to 1998)</u> | <u>Parking Available</u> |
|--|--------------------------|
| Main Lagoon | --- |
| Atrium Hotel (600 Rooms) | 638 |
| Tennis Complex & Athletic Facilities (excl. Child Care, Ice Rink) | 2,320 |
| Apartments (1 High-rise, Low-rise) (1 Bedroom - 222) (2 Bedroom - 104) | 550 |

| | |
|--|------------------------|
| Rohr (5 Story Building - 100,000 S.F.) | 512 |
| Rohr Credit Union (60,000 s.f.) | 240 |
| Public Parking except for "F" Street Park, Nature Center Parking | 115 |
| Overlock Park - Vener Pond Area, and parking | 39 |
| "F/G" Street Enhancement and Disilting Pond | --- |
| All Streets Except Loop Road for 2 High-rises North Residential Area (there is no reference to development of this Loop Road in the Phasing Plan) | --- |
| All Required Freeway Mitigation Measures | --- |
| Phase I Subtotal | 4,375 4,414 |
| <u>Phase II (1999 to 2002)</u> | |
| Conference Center (40,000 s.f.) | 1,086 |
| Co-Generation Plant | --- |
| Apartments - Residential Lagoon (1 Bedroom - 42) (2 Bedroom - 20) | 140 |
| Central Core Retail (145,000 s.f.) Extended Stay Hotel (300 Rooms) Apartments (1 Bedroom - 185) (2 Bedroom - 72) | 1,647 |
| Offices (60,000 s.f.) on Marina Parkway | --- |
| Rohr (5 Story Building - 260,000 s.f.) | 512 |
| Residential (Semi-Public) Lagoon | --- |
| Phase II Subtotal | 3,385 |
| Phase I & II Subtotal | 7,760 7,799 |
| <u>Phase III (2003 to 2005)</u> | |
| Resort Hotel (628 Rooms) | 94 |

| | |
|--|-------------------------|
| Athletic Facilities | |
| Ice Rink (5,000 Seats - 62,000 s.f.) | --- |
| Child Care Center (7,000 s.f.) | |
| Olympic Pool | |
| Apartments (1 High-rise, Low-rise) | 545 |
| (1 Bedroom - 207) | |
| (2 Bedroom - 100) | |
| Rohr Office Building (8 Stories) | 800 |
| Rohr Manufacturing (80,000 s.f.) | 100 |
| Rohr/SDG&E Right-Of-Way Improvement | --- |
| Buffer Park surrounding residential towers | |
| Phase III Subtotal | 1,539 739 |
| Phase I, II, III Subtotal | 9,299 8,538 |
| Phase IV (2006 to 2008) | |
| Luxury Hotel (250 Rooms) | 267 |
| Apartments - Residential Lagoon | 330 |
| (1 Bedroom - 86) | |
| (2 Bedroom - 43) | |
| Retail/Restaurant (Ground Floor 5,000 s.f.) around Residential Lagoon | 25 |
| City Site Offices (80,000 s.f.) | 264 |
| Improvement SDG&E ROW and Bay Boulevard | |
| Phase IV Subtotal | 886 |
| Phase I, II, III & IV Subtotal | 10,185 9,424 |
| Phase V (2009 to 2011) | |
| Inn (250 Rooms) at northwest corner of Bay Boulevard and "E" Street | 255 |
| Apartments (Bayview) | 537 |
| (1 Bedroom - 76) | |
| Public Parks-Parking | 329 |

| | |
|---|--------------------------|
| Apartments (1 High-rise, Low-rise) | 717 |
| (1 Bedroom - 269) | |
| (2 Bedroom - 124) | |
| "F" Street Park (There is no reference to the "F" Street park parking - 290 spaces - development on the Phasing Plan) | |
| Phase V Subtotal | 1,838 |
| Grand Total | 12,023 11,262 |

Additionally, according to Starboard Development Corporation, which is Rohr's planning and development consultant, Rohr's phasing would be different from what is shown on this phasing plan. Rohr anticipates that 360,000 square feet and associated parking will be built all within Phase I.

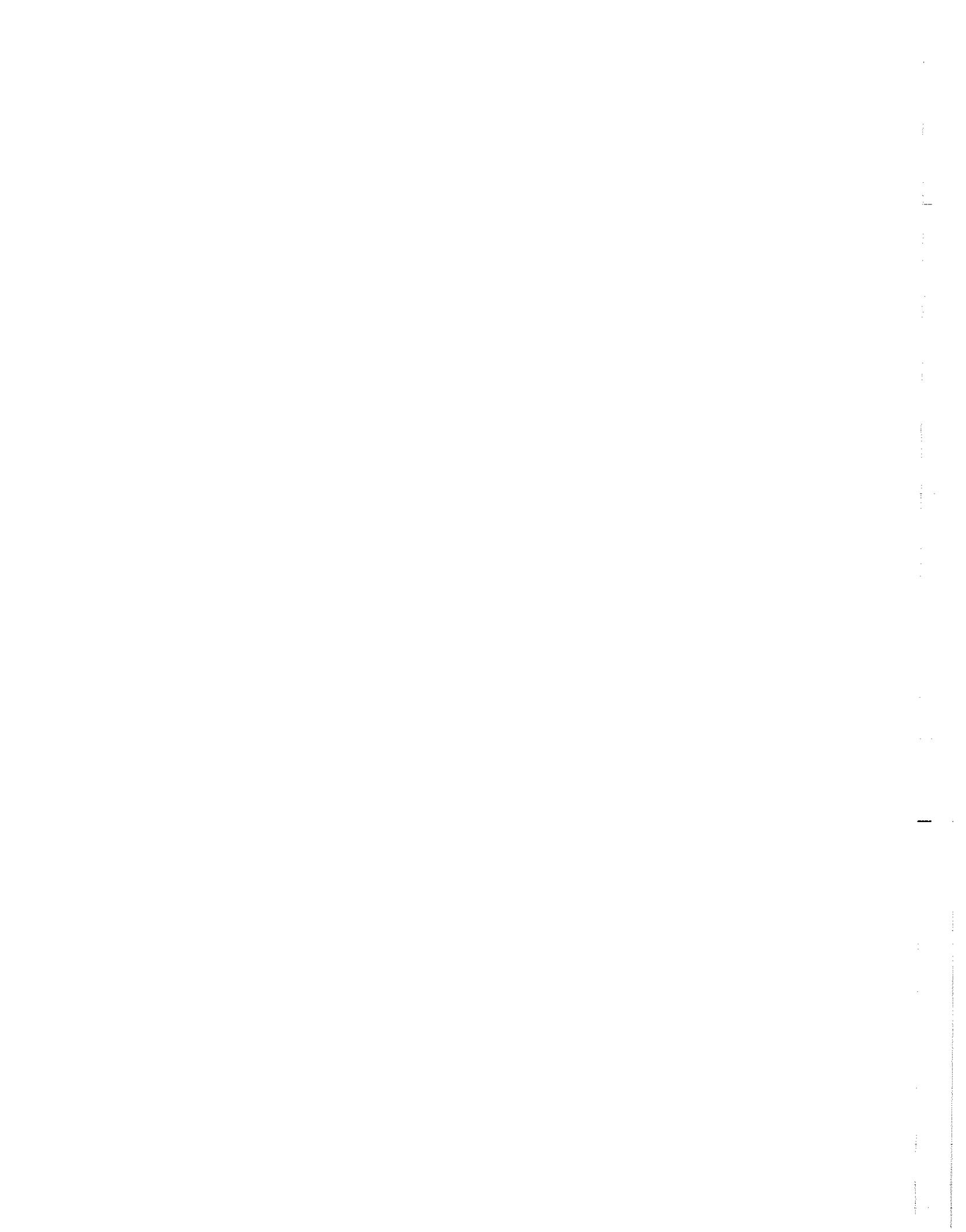
2.5 PREVIOUS ENVIRONMENTAL RELEVANT DOCUMENTATION

The existing, certified LCP and Redevelopment Plan are available for inspection at the City of Chula Vista Community Development Department. The General Plan is available for inspection at the City of Chula Vista Planning Department. Both City Departments are located at 276 Fourth Avenue.

The following environmental documents were prepared for previous LCP submittals and amendments. These documents are available for inspection at the City of Chula Vista Planning Department.

- Final Environmental Impact Report for the Bayfront Specific Plan, EIR 85-1, State Clearinghouse No. 84103108, 1985.
- Final Supplemental Environmental Impact Report for Amendments to the Chula Vista Bayfront Specific Plan, EIR 86-1, State Clearinghouse No. 86021919, 1986.

Also, a U.S. Army Corps of Engineers' "Section 404" permit, effective July, 1899 (No. 88-267-RH), includes relevant authorized actions within the project area. This permit is also on file at the City of Chula Vista, Community Development Department.



3.0 ENVIRONMENTAL IMPACT ANALYSIS

3.1 GEOLOGY/SOILS/GROUNDWATER

Existing Conditions

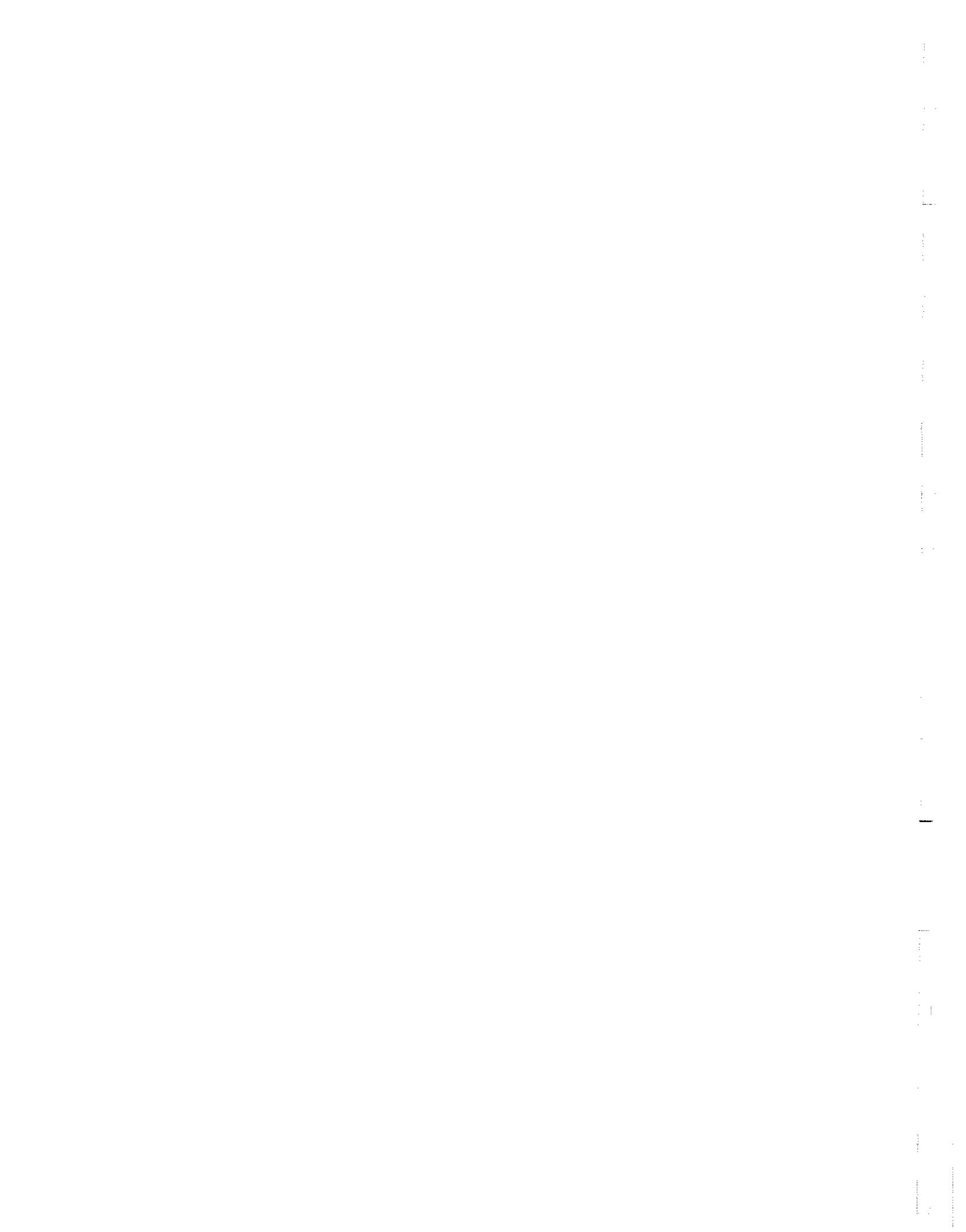
The present-day configuration of the southern California coastline can be said to have had its early beginnings during Cretaceous time (120 to 85 million years ago). At that time, the southern California Batholith intruded into existing Triassic and Jurassic-age strata, causing uplift to the east, and subsidence to the west where the deposition of marine sediments has continued through the last 60 to 80 million years. The project site lies within the San Diego Embayment Graben, a structural block down-dropped between the La Nacion fault zone (two to three miles east of the site), and the "San Diego Bay faults" (one to two miles west of the site). The San Diego Bay faults are generally believed to be a southerly extension of the Rose Canyon fault zone, described below under "Seismicity and Geologic Hazards." The formation of the San Diego Bay is directly related to the downward displacement of the San Diego Embayment Graben.

Site Topography and Improvements

Topographically, the project site (Midbayfront) is situated on the gently westerly-sloping Nestor Terrace, one of a sequence of well-defined wave-cut abrasion terraces created by varying sea stands during the Pleistocene glacial episodes. The irregularly-shaped project site measures approximately 4,000 feet from north to south, and 2,000 feet from east to west. The overall inclination of the broad, flat, westerly-sloping site surface is about 1 foot per 100 feet. The Bay Point Formation (dated at approximately 120,000 years) is exposed on the surface in the project area, and represents nearshore marine deposition on the terrace. The Sweetwater River, which empties into San Diego Bay along the northerly side of the site, has aggraded, filling its ancestral channel which had been incised an estimated 80 to 90 feet into the Nestor Terrace during one or more glacial periods when the sea stood at lower elevations.

The northern and northwestern boundaries of the project site follow along the edge of the relatively flat terrace surface above the Sweetwater River marshlands. The southwesterly part of the site is bounded by the waters of San Diego Bay. A broad, southerly draining swale and marshland (the "F" & "G" Street Marsh) covers most of the south-central part of the site area.

The majority of the flat surface in the project site has been used as farmland. Access roads laid out in a modified grid fashion, several large green houses, and irrigation piping constitute the major improvements over a portion of the site. The westerly extension of "F" Street and a few commercial buildings in the southwesterly part of the site area constitute the rest of the significant improvements.



Soils and Geologic Units

The near-surface soils at the site appear to consist of artificial fill soils (Qaf), estuarine/fluvial deposits (Qbd/Qal), and soils of the Bay Point Formation (Qbp). The estimated surface extent of these soil units, which are described below in order of increasing age, is depicted in generalized form on Figure 3-I.

Artificial Fill (Qaf)

Test excavations made by Geocon, Inc. and by Southern California Testing Laboratory, Inc. have revealed both "hydraulic" fill, dredged from deposits in the bottom of the bay, and "truck" fill which consists largely of land-derived soils, placed to build embankments and/or roads across soft areas. Hydraulically-dredged fill soils in the project site area consist primarily of loose to medium dense, gray silty fine sands with broken shell fragments, and inclusions or "wads" of brown Bay Point Formation clay, dredged up with the bay deposit soils. Land-derived fill soils appear to have been primarily derived from the red-brown silty to clayey sands of the Bay Point Formation in the general site area. "Trash" fill, consisting primarily of construction debris (concrete, wire, glass, lumber and steel), and household trash (grass cuttings, brush and organic debris) have been dumped over large portions of the areas designated "artificial fill" on the Site Plan. Trash fill has also been dumped on the surface of the Bay Point Formation in the area south of "F" Street and west of the "F" & "G" Street Marsh.

Estuarine/Fluvial (Qbd/Qal) Deposits

Soft, unconsolidated estuarine soils and loose, porous, fluvial and slopewash deposits were encountered in test excavations in essentially all of the low-lying areas surrounding the slightly higher westerly sloping abrasion terrace. The upper three to five feet of these "bay" deposits generally consist of soft, dark gray to black silty clays and clayey silts, with abundant organic material. This extremely soft and compressible upper layer is generally underlain by relatively clean, dark gray to black, medium dense, silty fine embayment sands.

Bay Point Formation

Near-surface formation soils in the project area generally consist of dense to medium dense, red-brown silty to clayey sands, with some sandy clay interbeds. A "mudstone-like" layer, generally between elevations -10 and -20 feet (mean sea level datum), overlay medium dense to dense, clean sands, which are characteristic of deeper Bay Point Formation sediments in other areas of San Diego Bay.

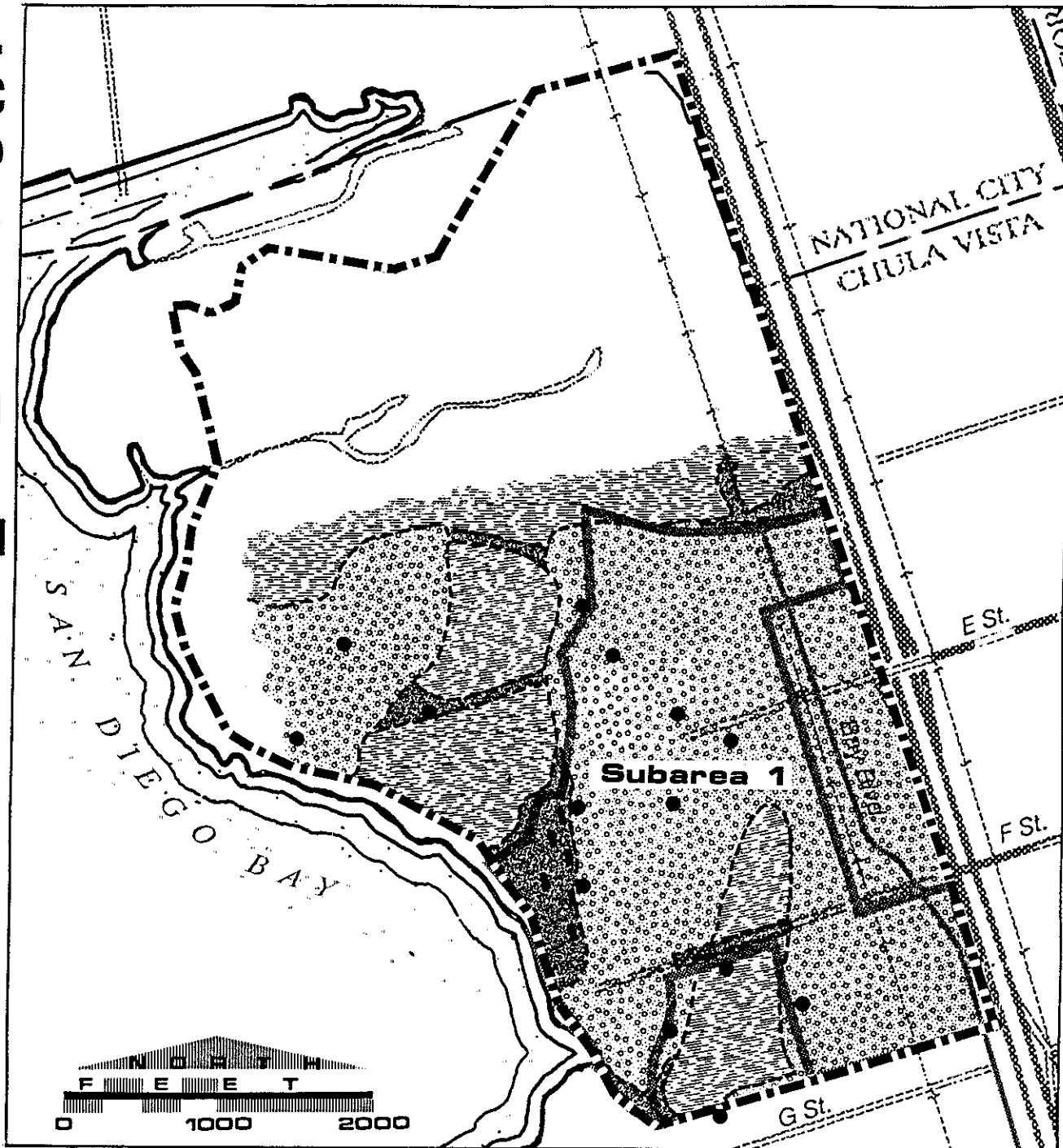
Seismicity and Geologic Hazards

The major San Diego and southern California fault systems form a northwest-southeast trending regional structural fabric, generally parallel to the San Andreas fault zone, which extends over land from the Gulf of California to the Bodega Basin north of San Francisco Bay. Structural geologists relate movement along the San Andreas and associated fault zones (at least for the past five million years), to movement along the boundary between



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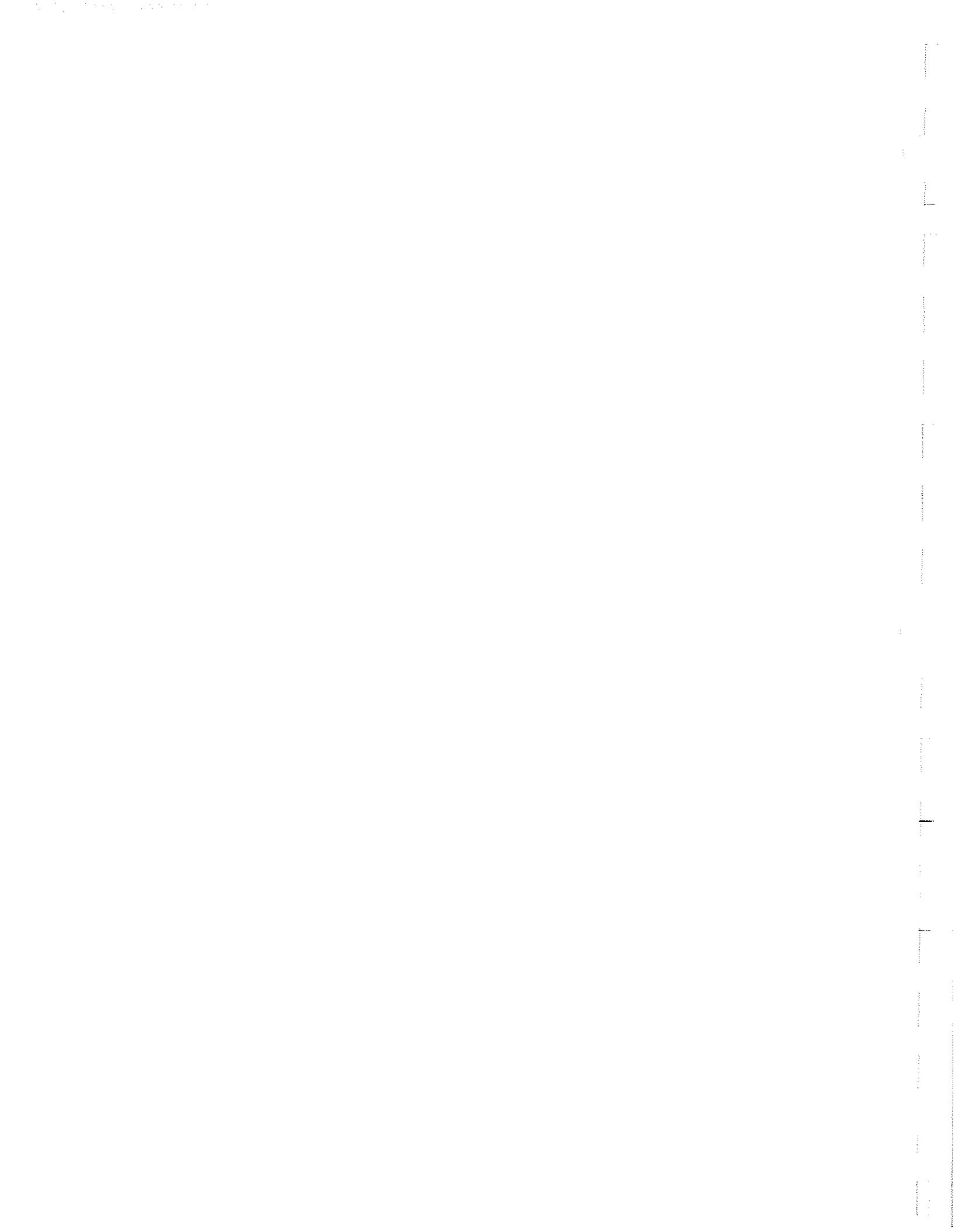
~~~ Approximate Contact between Soil/Geologic Units

- **Qaf Artificial Fill**
- **Qal/Qbd Alluvium and Embayment Deposits**
- **Qbp Bay Point Formation**

- **Test Trench (Geocon, Inc.: 6/6/84)**
- **Test Boring (Southern California Testing: 1/20/76)**

SITE GEOLOGY

Figure 3-I



the North American and Pacific tectonic plates. As a result, the southern California region is subject to significant hazards from moderate to large earthquakes. Ground shaking is a hazard everywhere in California. Fault displacement of the ground is a potential hazard at, and near, faults. Tsunamis, earthquake-induced flooding, and liquefaction are all hazards in the San Diego Bay area.

The fault zones nearest the site which are mapped as "active" are the Coronado Banks and the Elsinore fault zones. The nearest fault zone currently classified as potentially active is the Rose Canyon fault zone. The California Division of Mines and Geology is considering classifying certain segments of this fault zone as active, but this information has not yet been published.

#### Coronado Banks Fault Zone

The Coronado Banks fault zone is located offshore from San Diego, approximately 10 miles southwest of the project site area. It appears to be part of a discontinuous zone of faulting which includes the Palos Verdes fault near Los Angeles, and which extends southeastward beyond the Mexican border (Greene et al. 1979; Legg and Kennedy 1979). The total length of this fault zone is estimated to be approximately 130 miles and it is likely to be a strike-slip fault. Because of its mapped geologic displacements, one-half of total fault zone length was used as the length of surface rupture in order to estimate a maximum credible earthquake of surface wave magnitude ( $M_S$ ) 7. Offshore from San Diego, the Coronado Banks fault zone is near an area where the epicenters of numerous local magnitude ( $M_L$ ) microearthquakes ( $M_L$  2.0 to 3.4) have been plotted. The Coronado Banks fault zone may be associated with an  $M_S$  6-1/4 earthquake during a typical 100-year period.

#### Elsinore Fault Zone

The Elsinore/Laguna Salada fault zone (approximately 40 miles northeast of the project site area) is the nearest likely onshore source of a large earthquake. This fault zone is generally characterized by strike-slip displacement. The total length of the fault zone is approximately 255 miles; however, geologic displacements are relatively discontinuous and sinuous compared to those of the other major active faults. Therefore, it appears likely that the Elsinore fault zone would rupture in shorter segments (as a proportion of total length) than the other major active faults in the region. The general tectonic environment and expression of geologic displacements along the Elsinore fault zone suggest that it may be subject to a maximum credible earthquake of  $M_S$  7-1/2, which would be associated with a length of surface rupture of approximately 80 miles. The epicenters of numerous small earthquakes of  $M_L$  3.0 to  $M_S$  5.0 are located near the fault, suggesting that an  $M_S$  7 earthquake is likely to occur on the Elsinore fault zone during a typical 100-year period.

#### Rose Canyon Fault Zone

The most significant fault zone near the project site area is the Rose Canyon fault zone, which is currently classified as potentially active. This fault zone has been generally considered to exhibit no geologic displacement in the last 11,000 years (Ziony 1973); however, some small earthquakes and microearthquakes have epicenters on or near traces

of the San Diego Bay faults (Hileman 1979; Simons 1979). A series of these earthquakes occurred in 1985 and 1986. Moreover, evidence of displacement on the fault during the last 11,000 years has been reportedly discovered (Abbott 1989) near downtown San Diego, and at a site in Rose Canyon. Consequently, it may be advisable to consider the hypothetical earthquake hazard from the Rose Canyon fault zone. It appears reasonable to conclude that an  $M_S$  6-1/4 earthquake could occur during a typical 100-year period.

### Impacts

#### **Ground Settlement**

Surface and subsurface conditions vary throughout the bayfront. The higher elevations on site expose competent formation materials where no difficult or unusual land development problems are anticipated for standard building construction. In the balance of the area, however, ground settlement due to consolidation of soft and/or compressible deposits is likely.

Ground settlement is attributable to the presence of relatively shallow surficial deposits of soft, compressible bay muds throughout the historic marshlands and the tidal flats, as well as in the deeper water areas. This mud, an organic silty clay, is highly compressible under proposed foundation and/or fill loads, and would take years to stabilize under the weight of proposed fill or structures. Likewise, uncontrolled fill soils exist throughout portions of the site, are compressible in nature, and are considered unsuitable in their present condition for the support of any additional fill and/or structures. The degree of risk and significance of potential settlement impacts for the project and each alternative are summarized below.

#### Proposed Project

The portion of development proposed westerly of Marina Parkway includes a 120 foot-high luxury hotel and bungalows, all of which encroach onto uncontrolled fill soils overlaying bay deposits which border the current San Diego Bay. The uncontrolled fill soils and underlying bay deposits are compressible and unsuitable for the direct support of proposed fills and/or the hotel and the bungalows. Additionally, the ice rink, aerobics facility, child care facility, and tennis courts encroach onto the compressible bay deposits comprising the lower elevations of the seasonal fresh water marsh. These materials are also considered unsuitable in their present condition for the direct support of either engineered fills and/or structures, resulting in potentially significant impacts.

Grading would be necessary for sewer and water pipelines. No grading plan is available yet for these improvements. The LCPR No. 8 states the need for considerable earthwork on-site and off-site for these improvements. Until such grading plans are available, impacts from grading are considered potentially significant.

### Alternative 2 - Existing LCP

With this alternative, no structures are proposed to be built in any of the low-lying areas on site. Foundations for structures associated with this particular alternative will all be supported on relatively competent formation materials or, depending upon grading requirements, upon engineered fills constructed on these formation soils. Thus, no significant impacts would occur.

### Alternative 3 - Reduced Density 1

The portion of development proposed westerly of Marina Parkway includes a 16 foot-high luxury hotel adjacent to Marina Parkway, and a series of 25 foot-high bungalows extending westerly towards the bay. The bungalows encroach onto uncontrolled fill soils overlaying bay deposits, both of which are compressible and unsuitable for the direct support of proposed fills and/or the bungalows. Additionally, the ice rink, aerobics facility, child care facility, and tennis courts encroach onto the compressible bay deposits comprising the lower elevations of the seasonal fresh water marsh. These materials are also considered unsuitable in their present condition for the direct support of either engineered fills and/or structures, resulting in potentially significant impacts.

### Alternative 4 - Reduced Density 1A

The ice rink, aerobics facility, child care facility, and tennis courts encroach onto the compressible bay deposits comprising the lower elevations of the seasonal fresh water marsh. These materials are considered unsuitable in their present condition for the direct support of either engineered fills and/or structures, resulting in potentially significant impacts.

### Alternative 5 - Reduced Density 2

From a ground settlement standpoint, Alternative 5 has the same impacts as Alternative 4, where identical facilities encroach into the seasonal fresh water marsh area.

All of the development alternatives include the construction of a 10-acre salt water lagoon which would extend out to the westerly perimeter of the Midbayfront site adjacent to San Diego Bay. Separation between the salt water lagoon and San Diego Bay would be provided by a soil berm extending up to elevation +11 feet, and ~~presumably revetted along this bayward slope to prohibit shoreline erosion~~. Within the interior of the lagoon, slopes would range from four to five units horizontal to one unit vertical, and are proposed to be lined with a soil-cement liner to minimize loss from waters within the lagoon permeating through subsurface soil. The majority of this lagoon would encroach into the existing near-surface fill soils and underlying bay deposits fronting the bay. Berms constructed on these materials are therefore likely to experience settlement, which may damage the soil-cement lining if remedial measures are not provided.

## Roadways

Elsewhere, portions of roadways proposed in all of the alternatives would cross compressible soils in the vicinity of the "F" & "G" Street Marsh and the seasonal fresh water marsh, and will require some form of mitigation to control post-construction settlements. Also, those portions of roadways in Alternative 3 Alternatives 2 and 3 which extend westerly of Marina Parkway into the fill soils and underlaying bay deposits fronting San Diego Bay will require mitigation to improve post-construction performance of engineered fills supported on these compressible soils.

## Slope Erosion

Separation between the 10-acre salt water lagoon and San Diego Bay is to be provided by a soil berm extending up to elevation +11 feet. If unprotected, the bayward slope of the soil berm would be subject to shoreline erosion. The potential for erosion of the bayward slope results in a potentially significant impact.

## Alternatives 8 and 9

See the DEIR, Volume I, Section 4.2.1 and 5.2.1.

## Seismic Hazards

Ground shaking likely to occur during the anticipated life of the development would affect uses on the site regardless of the alternative. Bay muds tend to magnify the effects of ground shaking by amplifying the intensity of movement caused by earthquakes. Ground surface accelerations and site period (the frequency of oscillation) would be likely to vary somewhat across the site.

Although ground displacement could occur throughout the site, the perimeter slopes, portions of which extend out onto the bay muds, have the highest risk of failure during earthquake movement. The stability of these perimeter slopes could become significantly reduced during a major earthquake, resulting in movement of fill into the Bay.

Liquefaction is a potential hazard in all areas underlain by water-saturated sandy soils. Within the site vicinity, portions of the fluvial (Qal) deposits encountered in the low-lying areas are considered moderately susceptible to liquefaction. Additionally, clean sands were encountered within the formation soils below elevations of -10 to -20 feet and, although considered medium dense to dense in nature, these clean sands may be susceptible to liquefaction during severe ground shaking.

Tsunamis and earthquake-induced flooding are also potential hazards within the San Diego Bay, and a sufficient length of water surface exists within the bay to cause earthquake-induced flooding within low-lying areas.

The degree of potential seismic risk for the proposed project and each of the alternatives is similar with regard to ground shaking, ground displacement, and possible liquefaction of

the relatively clean portions of the formation soils encountered below elevations of -10 to -20 feet. The proposed project and Alternative 3, both of which have improvements westerly of Marina Parkway, are considered to be slightly more susceptible to the seismic hazards described above and considerably more susceptible to tsunamis and earthquake-induced flooding due to the proximity of proposed improvements adjacent to the bay. It should also be noted that the apartments in the proposed project and the restaurant in the alternatives located westerly of Marina Parkway and southerly of the salt water lagoon would be more susceptible to tsunamis and earthquake-induced flooding than other portions of the development located east of Marina Parkway.

Additionally, potential exists for earthquake-induced slope failures for that portion of the development fronting San Diego Bay, and also for slopes encroaching onto the "F" & "G" Street marsh and the seasonal fresh water marsh.

Seismic hazards are potentially significant; yet, standard required design criteria and conventional engineering techniques can be implemented to reduce the risk. Some risk would always remain due to the uncertainty of future seismic events.

### Groundwater Constraints

All of the development proposals, with the singular exception of the Alternative 2 - Existing LCP, incorporate relatively extensive subterranean parking with proposed finished floor elevations of 3.0 feet (MSL datum). Subterranean parking will in essence provide the foundations for virtually all of the structures elevated above the parking and, as such, the foundations for these structures will extend at least several feet below the floor elevation and are likely to extend as low as mean sea level. Groundwater associated with tidal fluctuations will oscillate around mean sea level, with the amplitude of oscillations increasing with proximity to the Bay. Subterranean parking located within 700+ 350 feet of the bay is likely to experience tidal fluctuations, forcing transient groundwater levels as high as approximate elevation +2 +3 to +4 feet. Groundwater recharge from landscaping and other inland water sources may result in further rises in transient groundwater highs.

The presence of groundwater affects both the construction and design of foundations for structures and its effects must be considered. From a design standpoint, slabs and other foundation elements founded below groundwater level experience buoyant forces equal to the elevation difference between the groundwater high and the bottom of the slab or foundation element. This may result in uplift pressures on subterranean parking slabs exceeding 100 pounds per square foot (psf), necessitating special precautionary measures to restrain the slab from lifting, breaking and inundating subterranean parking areas. The foundation design criteria are also altered by the presence of a groundwater table near foundation elements that essentially reduces the allowable bearing capacity by one-half, and increases wall pressures for those portions of walls that may exist below a groundwater high by a factor of two to three.

From a construction standpoint, the presence of a groundwater table obviously results in saturated soils which hamper construction in these materials. Saturated soils cannot be used in engineered fills until they are somewhat dried out in order to achieve compaction, and

saturated soils are highly susceptible to "pumping" when loaded by construction equipment, degrading the in-place quality of these materials. Thus, potentially significant impacts would occur from development of all subterranean parking associated with the proposed project and alternatives, 3, 4 and 5. See the DEIR, Volume I, Section 4.0 and 5.0 for discussion of Alternatives 8 and 9.

Except for Alternatives 2, 7 and 9, groundwater production wells are proposed along the western margin of the site. These wells are to provide replacement water for the proposed lagoons. A discussion of the wells and of the lagoons is found in Section 3.2, Hydrology/Water Quality.

### Mitigation

The following measures are recommended to offset the potentially significant impacts identified for (1) compressible bay deposits (ground settlement), (2) grading for water and sewer pipelines, (3) seismic hazards, and (4) foundation constraints associated with a high groundwater table. Although the various alternatives differ somewhat in scope, with the exception of Alternative 2 - Existing LCP, all incorporate relatively major structures, which will require extensive geotechnical studies to provide site-specific standard (feasible) foundation design criteria. Additionally, the proposed project and Alternative 3 - Reduced Density 1, have relatively major structures extending out into the shallow fills and bay deposits fronting San Diego Bay, again dictating site-specific geotechnical studies. Accomplishment of the measures described below would begin the mitigation process; but to completely mitigate potential impacts to a level below significant, detailed site and engineering design, and detailed soils and geotechnical studies must be prepared by a soils engineer. All standard engineering measures recommended in these studies must be implemented. All of the measures, the ones contained in this document and the future geotechnical reports standard engineering measures, must be carried out by the developer, and monitored under a Mitigation Monitoring Program. If standard engineering measures which are required are not being implemented, construction must halt until the measure is accomplished.

- When detailed development plans for the project area are proposed, detailed grading and drainage plans must be prepared in accordance with the Chula Vista Code, Subdivision Manual, and City ordinances and adopted standards. These plans must include not only grading for structures and roads, but also grading for on-site and off-site water and sewer pipelines. These plans must be approved and permits issued by the Engineering Division prior to any grading work. (Mitigates 1, 2, 3, 4)
- A site-specific geotechnical engineering investigation, including soils study and seismic study, should be performed for the detailed grading and drainage plan, and for each proposed structure for the project or any of the alternatives as a condition for issuance of building permits. Each investigation should contain adequate subsurface exploration and analyses to determine short- and long-term settlement magnitudes, expected seismic ground shaking magnitudes and characteristics, and potential mitigation for seismic ground failure

(including liquefaction). Each investigation should contain detailed foundation recommendations, and would be subject to review by the City of Chula Vista Engineering Department. (Mitigates 1, 2, 3, 4)

- All high-rise structures will probably require deep foundations, or some type of mat foundation integrated into subterranean parking, to provide adequate foundation support for the structure. (Mitigates 1, 3, 4)
- Structures that encroach onto areas overlain by existing fill soils, alluvial soils, or bay deposits will require some form of subgrade modification to improve the support capacity of the existing soils for the additional engineered fills and/or structural improvements. Soil improvement could include partial or total removal and recompaction, dynamic compaction, and/or the use of surcharge fills to pre-compress saturated alluvial deposits or bay deposits which exist below the groundwater table. Other conventional engineering techniques may also be used to mitigate potential geotechnical impacts due to compressible soil. These additional techniques may include designs such as deep foundations or mat foundations. (Mitigates 1, 3, 4)
- Roadways, embankments, and engineered fills encroaching onto existing compressible bay deposits and/or existing fill soils are likely to require subgrade modification to improve the support capacity of the existing soils and reduce long-term post-construction settlement. Soil improvement could include partial or total removal and recompaction, dynamic compaction, and/or the use of surcharged fills, to precompress saturated alluvial deposits or bay deposits which exist below the groundwater table. Portions of roadway fills, embankments, and other engineered fills may be judged capable of accommodating some post-construction differential settlements, depending upon the type of improvements they are to support. Site-specific geotechnical studies should address post-construction settlement potential as well as ways to mitigate post-construction total and differential settlements to acceptable ranges, based on the specific types of improvements proposed. (Mitigates 1, 3, 4)
- It should be noted that the use of a the currently planned soil-cement lining (covering a clay soil layer) for the 10-acre salt water lagoon (which encroaches onto compressible bay deposits) is a relatively brittle material, and may require relatively stringent subgrade improvement to ensure acceptable long-term performance. There are other options for this type of liner, including clay soil liners and flexible pond liners. The applicant must show which liner would be used, any subgrade improvements necessary, and the choice and design must be approved by the City. (Mitigates 1, 3, 4)
- To reduce the risk of property damage and injury caused by seismic shaking, geotechnical studies should specifically address seismic analysis based on site-specific subsurface data. At As a minimum, seismic analysis should address seismically-induced slope failure, liquefaction, and ground surface

accelerations. Measures are technically available to reduce seismic risk, and should be recommended as appropriate, and implemented into the project design. (Mitigates 1, 3)

- The embankment separating the 10-acre salt water lagoon from San Diego Bay has tentatively been designed with a crown elevation of +11 feet. Wind-induced storm waves (discussed in the Hydrology section of this EIR), or earthquake-induced flooding could exceed the height of the embankment. An assessment should be made to evaluate stability of the embankment during these conditions and the likelihood of these hazards. Mitigation may include either elevating the height of the embankment or reinforcing the crown of the embankment. (Mitigates 1, 3)
- Geotechnical studies should also address the impact of foundation location near or below the groundwater table, and suitable recommendations should be provided to mitigate both construction-period difficulties and uplift pressures that may affect both foundation elements and subterranean parking floor slabs extending below the transient groundwater level. Construction-period mitigation may require temporary dewatering and/or utilization of a gravel mat to provide a working surface upon which to operate construction equipment. Design techniques to accommodate transient groundwater highs may include thicker concrete slabs to provide sufficient dead weight to resist uplift pressures, deep foundations and/or structural foundations to restrain slabs, a permanent dewatering system to accommodate transient groundwater highs, or pressure relief valves in the floors of parking structures to prevent damaging uplift pressures. (Mitigates 4)

#### Analysis of Significance

Development of the proposed project and alternatives would result in four potentially significant impacts:

1. Ground settlement due to consolidation of the compressible estuarine/fluvial (bay) deposits and the artificial fill soils on site;
2. Grading impacts for on-site and off-site water and sewer pipelines.
3. Seismic hazards, including ground shaking, surface displacement, liquefaction, tsunamis, and earthquake-induced flooding; and
4. Potential foundation design and construction difficulties associated with the construction of foundations at or near the groundwater table.

Mitigation measures are available to reduce the identified impacts to a level below significant. Those measures must include:

- Preparation of a detailed grading and drainage plan for all on-site and off-site improvements, implementation of all standard (feasible) engineering design and recommendations. (Mitigates 1, 2, 3, 4)
- Site specific geotechnical engineering investigation with detailed foundation recommendations, implementation of all recommendations. (Mitigates 1, 2, 3, 4)
- Deep or mat foundations for high rises and subterranean parking structures. (Mitigates 1, 3, 4)
- Subgrade modification of existing fill and alluvial soils and bay deposits. (Mitigates 1, 3, 4)
- Subgrade modification of soils for post-construction settlement potential in roadways, embankments and engineered fills. (Mitigates 1, 3, 4)
- Use of adequate pond liner approved by the City. (Mitigates 1)
- Geotechnical studies to address seismic risk, and to propose mitigation recommendations. (Mitigates 1, 3)
- Assessment of lagoon embankment stability in the event of ~~shoreline erosion~~ or ~~overtopping~~ over-topping by waves, and proposal of mitigation recommendations, including reinforcement (e.g., revetment) of the bank or raising of its height. (Mitigates 1, 3)
- Foundation design ~~or dewatering program~~ to relieve ~~accommodate~~ possible subgrade pressures on the foundation from groundwater. (Mitigates 4)

In the absence of site specific grading plans and geotechnical studies, it is not possible to conclude that grading, drainage, geotechnical impacts and seismic risk ~~can be~~ are mitigated to a less than significant level with the information provided at the plan-level EIR. Therefore, these potential impacts remain significant.

However, it is noted that standard (feasible) engineering design criteria exist to provide mitigation of impacts of ground settlement, drainage, and grading impacts. These impacts are therefore considered significant, but mitigable. Potential impacts associated with seismic risk (ground displacement and liquefaction) require additional study to determine actual impact significance. Impacts associated with seismic risk are therefore considered significant and not mitigated at this level.

## 3.2 HYDROLOGY/WATER QUALITY

### Existing Conditions

The project site (Midbayfront) is located along the eastern shoreline of south San Diego Bay adjacent to, and just south of, the mouth of the Sweetwater River. A large portion of the site is comprised of salt water marsh below five feet (mean sea level datum) in elevation. The Midbayfront project area consists of most of the higher topography west of Interstate 5 in the vicinity of "E" and "F" Streets, but also contains some marshland (the "F" & "G" Street Marsh and the seasonal fresh water marsh), and other low-lying natural ground bordering the marshlands (and San Diego Bay) which surround the margins of the Midbayfront site. All of these low-lying areas are subject to inundation during inland flooding, and likewise are susceptible to inundation during tidal highs within San Diego Bay, aggravated ~~exacerbated~~ by onshore waves generated within San Diego Bay. Existing site drainage is shown on Figure A, located in Appendix G.

The Midbayfront site includes a total of approximately 135 acres of the Chula Vista bayfront. Within the site boundary, a slight ridgeline nearly bisects the site from the northeast corner to the southwest corner, resulting in a watershed divide which drains approximately 84 acres into the "F" & "G" Street Marsh, and the remainder of the site either directly into San Diego Bay or into the Sweetwater Marsh, Vener Pond, or the "E" Street Marsh.

Existing storm drainage improvements are limited to the culvert under the extension of "F" Street which drains the seasonal fresh water marsh into the "F" & "G" Street Marsh, and a culvert under what would be the re-aligned Marina Parkway draining the "F" & "G" Street Marsh to the San Diego Bay, along with several discharge points from adjacent higher ground discharging onto the site, most notably into the "F" & "G" Street Marsh on the south. Existing storm drains within the site proper are undersized for compliance with City of Chula Vista design standards, and would be replaced as part of the proposed Midbayfront development.

The City's Threshold Standards objective for drainage is that "individual projects will provide necessary improvements consistent with the Drainage Master Plan(s) and the City Engineering Standards." Developers are required to have a drainage system designed that meets all City requirements as outlined in the Drainage Master Plan and City Engineering Standards.

### Impacts

Site area storm drainage and detention basin studies have been carried out by Rick Engineering Company (REC), and are reported in two separate documents, both dated August 11, 1989. These reports are available for review at the City's Community Development Department. The proposed LCPR No. 8 text dictated that any proposed development would provide for an adequate on-site storm drainage system to preclude drainage directly into wetland habitat through an adequate filtering of sediments or trapping of pollutants as set forth in the Corps of Engineers 404 Permit. Performance standards

describing the minimum storm water collection system requirements, as outlined in the proposed document include:

An all-gravity system should be used with provisions for intercepting the drainage from various points in the area. Building pads shall be placed above the 100-year flood level (approximately elevation 10) and above higher high tide level. Gravity pipe or street flow shall be at a minimum slope of 3 inches per 100 feet. Desilting/retention basin shall be required at particular junctures, and a major detention basin shall be constructed in the Midbayfront to accept surface drainage and to provide for desilting and oil and chemical entrapment. The major orientation, however, shall be to San Diego Bay.

The proposed gravity pipe, at a minimum slope of 3 inches per 100 feet (0.25 percent) is inconsistent with the City's Subdivision Manual which requires a minimum slope of 6 inches per 100 feet (0.5 percent).

The proposed modifications to site drainage, as described in the two REC hydrology documents include increasing the watershed into the seasonal fresh water marsh from 46.7 acres to 96.3 acres, and converting the seasonal fresh water marsh into a detention basin designed to limit post-construction 10-year and 100-year design discharges to levels at or below existing discharges. By collecting the additional tributary watershed as described in the REC detention basin study, approximately 50 acres of the development, which would have drained into San Diego Bay, have been redirected into the proposed detention basin adjacent to the "F" & "G" Street Marsh, and subsequently through the "F" & "G" Street Marsh to San Diego Bay. Discharge to the bay is through a drain pipe under the existing embankment. This will attenuate flood peaks and help control the flow of sediment and chemical pollutants into both the "F" & "G" Street Marsh and San Diego Bay as storm runoff will leave the detention basin at a slower, controlled rate. Impacts to biological resources from this action are discussed in Section 3.7. Although approximately 34.5 acres of the Midbayfront site will still drain into San Diego Bay, drainage on site will be captured in storm drains, presumably with oil and grease traps installed just upstream, before being conveyed through a storm drain system to two outlet points along the western margin of the site.

Site hydrology poses five potential significant impacts to development within the Chula Vista bayfront. They include the following:

1. Flooding of low-lying areas from tidal highs, compounded by runup from wind-driven waves (coastal flood hazards);
2. Flooding from the Sweetwater River;
3. Erosion from inland or coastal flooding;
4. Flooding associated with exceeding the capacity of proposed storm drain facilities on site; and

## **5. Siltation and chemical contamination degrading water quality.**

The proposed project and each of the alternatives utilize similar grading and on-site drainage schemes and, thus, are susceptible to the potential impacts listed above.

### **Coastal Flood Hazards**

The proposed LCPR No. 8 text dictates that building pads shall be placed above higher high tide level, but is not specific about a design still water level (SWL - highest level surface water could reach without waves). This should include the astronomical high tide, additional increases associated with reduction in barometric pressure, and wind and wave setup as well as any increases associated with rising sea level. On top of the design SWL, wind-driven waves from within San Diego Bay upon shoreline structures will result in some amount of predictable wave runup which may overtop relatively low structures. This is true for the entire westerly margin of the Midbayfront site, which ranges from elevation +10 to +11 feet.

### **Inland Flooding From the Sweetwater River**

The proposed LCPR No. 8 text dictates that building pads shall be placed above the 100-year flood level (approximate elevation 10 feet). As indicated previously, perimeter improvements within the Midbayfront development raise grades to at least elevation +10 feet. Although this is in compliance with the text, adequate documentation should be provided to ensure that flood waters discharging from the Sweetwater River do not inundate proposed improvements, and that adequate freeboard is provided to protect those improvements. It should be noted that the Federal Emergency Management Agency (FEMA) specifies a minimum 1 foot of freeboard above the 100-year flood stage for placement of proposed improvements.

### **Erosion From Inland or Coastal Flooding**

Shoreline erosion around the perimeter of the Midbayfront site can result from wind-driven waves off San Diego Bay or from inland flooding from the Sweetwater River. The materials used for construction of embankments and perimeter fills surrounding the Midbayfront development are likely to be susceptible to erosion from both wind-driven waves and inland flooding.

### **On-Site Flooding**

The Midbayfront development controls virtually all surface water through a series of storm drains, with roughly 70 percent of the site discharging into a proposed detention basin located at what is currently known as the seasonal fresh water marsh. The remainder of the proposed site drainage would discharge directly into San Diego Bay via a single 27 24 inch-diameter culvert near the mouth of the current "F" & "G" Street Marsh and a twin 36 42 inch-diameter culverts at roughly the mid-point of the proposed 10-acre salt water lagoon. Discharge into the bay from the 50-year design storm event amounts to 24 cubic feet per second (cfs) for the 27 24 inch-diameter pipe and 40 cfs for the twin 36 42 inch-diameter

~~pipes~~, both of which discharge directly into the Bay. Discharge into the "F" & "G" Street Marsh for the 100-year design storm is 41 19 cfs. As indicated previously, the detention basin ~~was~~ is part of the system designed to limit the 100-year post-development peak discharge to that of the existing conditions. The "F" & "G" Street Marsh will, in effect, serve as an additional detention facility, and the required attenuation of storm discharge (41 cfs/100 year and 8 cfs/10 year) will be realized as discharge travels from the "F" & "G" Street Marsh to the bay through the existing culvert under Marina Parkway.

Gradients of storm drains within the western margin of the site are reportedly as flat as 0.235 feet per 100 feet (where the twin 36 42-inch storm drain discharges into the bay), and typically 0.3 feet per 100 feet along virtually the entire perimeter storm drain line extending up to the "E" Street Marsh. The LCPR No. 8 text specifies minimum gravity storm drain gradients of 3 inches (0.25 feet) per 100 feet, and storm drains within the proposed Midbayfront development comply in all instances, with the exception of the final discharge leg of the twin 36 42-inch pipes into San Diego Bay adjacent the 10-acre salt water lagoon. It should be noted again that, although the text specifies minimum storm drain gradients of 3 inches per 100 feet, the City of Chula Vista Subdivision Manual specifies minimum storm drain gradients of 6 inches per 100 feet. Approximately 2,000 linear feet of the perimeter storm drain proposed in the REC drainage study do not comply with the City's more stringent minimum gravity storm drain gradient requirement.

In reviewing the REC drainage study, it appears that, in general, proposed drainage within the Midbayfront development project is consistent with the proposed LCPR No. 8 text and that the 50-year design storm has been selected as the controlling criterion for sizing storm drains as specified in the Chula Vista Subdivision Manual. ~~The City Engineering Division requires, The Federal Emergency Management Agency and prudent engineering practice require, however, that all drainage calculations should be done performed for the 100-year design storm, and evaluate how the results obtained may affect site improvements. Although storm drains are sized to handle the 50-year design storm, it is appropriate to calculate the 100-year event, and make provisions to obviate major property damage and loss of life for the storm runoff expected to occur once each 100 years (Denver Regional Council of Governments, March 1969). The impact of the 100-year storm has not been investigated.~~

It appears that the selection of runoff coefficients, in general, are appropriate and consistent with the guidelines provided in the City's Subdivision Manual. As stated earlier, however, the proposed gravity pipe is inconsistent with City Subdivision Manual Standards. ~~Also, it should be noted that in reviewing the REC computer printouts computing runoff for Nodal Point 303, the selected runoff coefficient of 0.45 may be in error. It probably should have been 0.75, which would increase this subarea runoff by approximately 3 cfs.~~

### Degradation of Water Quality

Regarding urban runoff, the proposed LCPR No. 8 text also specifies that "special caution is required at the marshes to reduce problems of silting as well as oil or chemical contamination." The desiltation basin is included in the project design to trap contaminants before they enter the "F" & "G" Street Marsh. A pipe from the desiltation basin carries

water from the basin to the "F" & "G" Street Marsh. The existing surface runoff for a 100 year-storm flow into the desiltation basin (presently a seasonal fresh water marsh) is 53 cfs, and into the "F" & "G" Street Marsh is 41 cfs. The 10 year-storm flows for each are 11 cfs and 8 cfs, respectively. Once the project is developed, 100 year-storm flows into the desiltation basin would be 160 cfs, and into the "F" & "G" Street Marsh would be 28 cfs. The 10 year-storm flows would be 58 cfs and 3 cfs, respectively.

In reviewing the REC drainage study, grease and heavy metal particulate traps are proposed at inlets and at cleanouts. These essentially modify the County Regional Standard Drawings for the Type B-6 Cleanout and the Type B Inlet to include a baffle and two stilling blocks which presumably would trap sediment, grease and oil. These relatively innovative three-chambered oil/grease/sediment traps are intended to intercept pollutants before they enter either San Diego Bay or the detention basin. These traps are to be installed just upstream of the two outfall locations into San Diego Bay and the three outfall locations into the detention basin.

The effectiveness of these basins is directly related to proper maintenance (cleaning). When traps are cleaned prior to the rainy season, the possibility of flushing the collected contaminants through the structure is minimized.

The operational effectiveness of these three-chambered traps has not yet been confirmed. It is noted that at the present time, the generally accepted standard design for sediment, oil, and grease traps consists of a two-chamber unit. The applicant has committed to the larger three-chamber traps (which presumably provide a higher level of protection than the standard two-chamber traps) at the request of the USFWS.

No performance data are currently available on the operational effectiveness of this design. Rick Engineering anticipates that monitoring data will demonstrate that the operational effectiveness of this design is superior to the current, standard two-chamber unit.

The current concept for the lagoon planned for the majority of the alternatives would utilize available groundwater to be pumped from on-site wells to be located near the lagoon to support a proposed salt water environment. As we understand, water demands for support of the salt water lagoon would require a continuous average sustained yield of 50 gallons per minute (gpm) and a maximum sustained yield throughout the summer months approaching 82 gpm.

Preliminary aquifer studies performed by Geocon Environmental Consultants, Inc. (Geocon, 1990, Appendix G) suggest that the potential safe yield of water wells installed within 500 to 100 feet of San Diego Bay would be on the order of 10 to 20 gpm per well, suggesting the requirement for upwards of 8 wells to meet the demands of the proposed lagoon.

Limited groundwater sampling was also performed on properties the Rohr Industries site located near the southeast corner of the Chula Vista Bayfront Project as part of a site assessment evaluating the presence of hazardous substances in the groundwater (Woodward-Clyde Consultants, May 18, 1989). Those studies encountered chlorinated hydrocarbons in all groundwater monitoring wells, as well as relatively high levels of trichloroethene (TCE),

concentrations in 4 of the 9 wells, with maximum values of 98  $\mu\text{g}/\text{l}$ . Although chemical testing was not performed on samples of the Geocon groundwater supply (GEC, November 9, 1990), it is likely that chlorinated hydrocarbons and possible measurable concentrations of TCE, may also no measurable quantities of groundwater contamination from Organochlorine pesticides, PCBs or volatile organics (VOCs) were found to exist in the aquifer proposed for extraction of groundwater for support of the salt water lagoon.

None of the groundwater studies performed to date has fully evaluated the possibility of sea water intrusion, which may cause groundwater to shift from fresh water to salt water, and thus impact the approach for providing source water for the lagoon. Since sea water is heavier than fresh water, in the absence of any upland groundwater extraction, a fresh water groundwater table will overlie the adjacent salt groundwater and may, under certain conditions, provide a fresh water yield for the lagoon, especially under limited groundwater extraction. GEC has, however, stated (November 9, 1990) that salt water intrusion from San Diego Bay is expected to occur following the start of water production from the proposed well field, but predictions of the rate of salinity change cannot be provided without additional data.

With sufficient groundwater extraction, a cone of depression is formed about the pumping well in the fresh water, and an inverted cone of salt water will rise into the fresh groundwater, ultimately contaminating the fresh groundwater. A salt water rise of approximately 40 feet per foot of fresh water drawdown may occur, depending upon the local situation, and at least occasional salt water intrusion should be expected.

Thus, the information provided from the applicant for this EIR regarding the quantity and quality of groundwater is limited for the 10-acre lagoon, with no information for the smaller 2.6 acre semi-public lagoon. Other existing data suggest that water extracted from groundwater may become contaminated due to movement of existing off-site contaminants migrating to the project area due to the influence of pumping. Although impacts from contaminated groundwater were not found at the project site, the adjacent properties are known to have groundwater impacted by VOCs. The history and current condition of other adjacent sites has not been investigated and is not known. This limited information with potential groundwater contamination creates a potentially significant impact. Although considered limited, the potential exists that pumping of the well field may enhance the movement of VOCs or other dissolved constituents.

### Mitigation

Five potentially significant impacts were cited, including (1) flooding, (2) erosion, (3) urban runoff (oil, grease, pesticides, etc.), (4) inconsistency with City standards in the site calculations, and (5) limited data regarding quantity and quality of groundwater to be used to fill the 10-acre public lagoon; also, no data regarding source of water for the semi-public lagoon in the northern portion of the site.

The following measures are required to reduce the identified potentially significant hydrologic impacts to a level below significant. All measures must be implemented and monitored via a Mitigation Monitoring Program; if the monitor finds that any of the

recommendations are not being implemented, construction must halt until the measure(s) is accomplished. As indicated previously, all of the alternatives utilize similar grading and on-site drainage schemes and, thus, mitigation measures in general apply equally to all of the alternatives.

- A detailed drainage plan must be prepared in accordance with the Chula Vista Code Subdivision Manual and applicable ordinances and adopted standards (including Thresholds Standard Policy). The plan must be approved and a permit issued by the Engineering Department prior to installation of any drainage structures. ~~Any deviation from City standards must be approved by the City Engineer~~ (Mitigates 1, 2, 3, 4)
- A site-specific hydrology study should be performed for the Midbayfront site, addressing the issues of the drainage plan, flooding of low-lying areas during high tide conditions (including design still water level); the effect of wind-driven waves generated from within San Diego Bay; flooding from the Sweetwater River; ~~and erosion from inland or coastal flooding;~~ ~~and the effectiveness of the proposed detention basin.~~ (Wave studies and mitigation of wind-driven waves should be in conformance with criteria set forth by the U.S.Army Corps of Engineers for design of coastal structures.) As water quality is a major concern, ~~studies should address~~ the effectiveness of proposed oil and sediment traps, as well as that of the desilting basin in removing both sediment and chemical pollutants from the "F" & "G" Street Marsh ~~shall be monitored for a minimum period of three years, and, ultimately, San Diego Bay.~~ All recommendations must be implemented before or during project construction. (Mitigates 1, 2, 3, 4)
- Recommendations should be provided for erosion control to mitigate both coastal erosion and erosion from inland flooding. Additionally, ~~consideration should be given to the effects of relatively high velocity discharges from monitoring~~ shall be performed for a minimum period of three years to evaluate the effectiveness of the proposed outlet protection at the on-site storm drains discharging directly into San Diego Bay. The existing bay deposits, located bayward of the two proposed discharge points, are highly susceptible to erosion and the resulting scour is likely to impact sensitive marine habitat west of the Midbayfront site, ~~if not properly mitigated by the proposed discharge aprons.~~ (Mitigates 2, 3)
- Traps for contaminant control must be approved by the City Engineering Department before they may be installed. The City Engineering Department must verify that all EPA, and any Regional Water Quality Control Board Standards ~~and all other applicable regulations~~ are met. If they are not, grading may not proceed until the standard is met. Proof of effectiveness must be shown before approval can occur. (Mitigates 3)
- The proposed on-site storm drain system should be designed in accordance with City of Chula Vista Standards and ~~a clarification made regarding the~~

~~discrepancy in minimum gradients for gravity storm drains, as specified in the proposed LCPR No. 8 text and the City of Chula Vista Subdivision Manual. Any deviation from these standards must be approved by the City Engineer. In addition, calculations should be made for the 100-year design storm, as required by the Engineering Division FEMA and prudent engineering practice.~~ (Mitigates 4)

- ~~Detailed groundwater quantity and quality studies must be performed to (1) verify the ability to pump the required amount of water to fill the 10-acre public lagoon, (2) assess the quality of the groundwater, and (3) assess the same two above~~ The applicant shall address the groundwater quality and quantity for replacement water required for the semi-public lagoon in the north portion of the site (assuming groundwater extraction as the source; if it is not, the source must be approved by the City). If groundwater is not available in the required amount, and/or if it is contaminated, then a different source must be used. An intake from the San Diego Bay is a possible feasible source. (Mitigates 5)
- The operation of the detention basin upstream of the "F" & "G" Street Marsh is intended to maintain water quality, and specific measures are provided in the proposed LCPR No. 8 text (1989:16-84) to maintain proper performance; however, some of the measures are considered either unachievable or inadequately described. These measures include:
  - Control of detention basin discharge (state how/when this is controlled)  
~~Reduce contaminants prior to rainstorms (need to state how)~~
  - Increase street cleaning (need to state how often)
  - Clean parking lot catch basins frequently (need to state how often)
  - Regulate construction schedules (need to clarify) (See pages III-39 to III-42)
  - Control erosion at new construction sites (need to state how) (See pages II-86 to II-87, and III-38 to III-42)

Recommended measures which are considered achievable are reiterated ~~on at the top of~~ the next page and should be followed, as these and the above measures which need to be modified would be necessary to maintain water quality in both the "F" & "G" Street Marsh and lower San Diego Bay.

- Re-seed or apply vegetation cover to disturbed areas.
- Control littering by providing adequate receptacles, frequent pickup, educational signs, and enforcement.

Compliance with the requirements of the Army Corps of Engineers 404 permit would be handled through the ACOE.

### Analysis of Significance

Five potentially significant hydrology/water quality impacts were cited as a result of development of the project and the alternatives. These include:

1. Flooding of (a) low-lying areas from tidal highs, compounded by runup from wind-driven waves (coastal flood hazards); (b) flooding from the Sweetwater River; (c) flooding associated with exceeding the capacity of proposed storm drain facilities on site;
2. Erosion from inland or coastal flooding;
3. Siltation and chemical contamination/degradation of water quality from surface runoff (pesticides, fertilizers, oil, grease, etc.);
4. Inconsistency with City of Chula Vista standards, specifically related to the design storm flow ~~and gravity pipe requirements and the selected runoff coefficient (only for Nodal Point 303)~~; and
5. ~~Potential for contaminated groundwater to fill the 10 acre public lagoon, and Limited data regarding quantity and quality of water for both the 10 acre public lagoon and the semi-public residential lagoon in the northern portion of the site.~~

Mitigation measures are available to reduce the identified impacts to below a level of significance. Those measures must include:

- Preparation of a detailed drainage plan which must be approved by the Engineering Department before construction. Consideration should be given to raising proposed pad elevations at the easterly portion of the site in order to provide no less than a 0.5 percent westerly slope of the storm drain system. (Mitigates 1, 2, 3, 4)
- Where storm drain pipes are installed with slopes flatter than 0.5 percent, and/or where the storm drain pipes are continually or intermittently under water as at bay discharges, an annual pipe inspection (e.g., by video camera) shall be provided. Any siltation problems can then be cleaned prior to the following rainy season.
- Preparation of a site-specific hydrology study to address flooding, and erosion, detention basin effectiveness, oil and sediment trap effectiveness and desilting basin effectiveness. Recommendations developed as a result of this study must be made a part of the Mitigation Monitoring Program. If recommendations are not carried out, construction must halt until they are. (Mitigates 1, 2, 3, 4)

- Erosion control recommendations developed during site-specific hydrological studies must be provided, and made a part of the Mitigation Monitoring Program. These erosion control recommendations are to include coastal erosion of embankments, erosion from inland flooding (including exceeding capacity of site storm drain system), erosion from flooding of the Sweetwater River, and erosion of the mudflats at storm drain outlets. (Mitigates 2)
- The embankment separating the 10-acre salt water lagoon from San Diego Bay is to be constructed as a soil berm extending up to elevation +11 feet. The bayward slope may be subject to shoreline erosion. Likewise, the landward slope may be subject to erosion from inland flooding. Mitigation measures may include a rock revetment to minimize erosion, or other suitable design. (Mitigates 2)
- According to REC, the detention basin has been designed with a minimum 1-foot freeboard based on a 100-year/6-hour storm event. Additionally, a dip in "F" Street creates a spillway for excess waters, which would then encroach on "F" Street as they travel over the embankment and into the "F" & "G" Street Marsh (John Goddard, pers. comm.)

Conventional engineering practice requires consideration of inclusion of an emergency spillway in the design of the basin. This spillway would be designed to discharge excess storm water without encroaching on "F" Street, or causing damage to the downstream embankment.

- It is noted that proposed design of the detention basin in effect makes use of the adjacent "F" Street embankment on the southerly edge of the basin as a small dam. A dam of this relatively small size is required to comply with the requirements of the County of San Diego. The County Design and Procedure Manual (rev. October 1985) outlines spillway design for small dams (p. 11-13) which uses significantly greater storm criteria than that used by the applicant's engineer. The applicant will be required to comply with all applicable County of San Diego regulations. Compliance with these regulations will be verified by the City of Chula Vista Engineer.
- Traps for contaminant control must be approved by the City Engineering Department before they may be installed. ~~Proof of effectiveness must be shown~~ A monitoring program shall be prepared and approved by the City and other pertinent agencies before approval can occur. (Mitigates 3)
- ~~Groundwater study must be performed to assess The adequacy of quantity and quality of both 10 acre public lagoon, and groundwater for the semi-public residential lagoon in northern portion of the site must be addressed.~~ If quantity and/or quality not adequate, use a different source of water to be approved by the City. A possible feasible source is the adjacent San Diego Bay. (Mitigates 5)

- The storm drain system will be designed in accordance with City standards, and the LCPR No. 8 text should be revised to correct the discrepancies between it and the City's Subdivision Manual (design storm flow, gravity pipe requirements, runoff coefficient Nodal Point 303). (Mitigates 4)
- The eight LCPR No. 8 measures regarding water quality listed on the previous page should be fulfilled by modifying them for clarification and including them in the Mitigation Monitoring Program. (Mitigates 3)

In the absence of a detailed drainage plan, a site specific hydrology study, and a groundwater study, it is not possible to conclude that hydrology/water quality impacts ~~can be mitigated to a~~ are less than significant level. Therefore, these potential impacts remain significant. However, standard feasible engineering techniques exist to mitigate coastal and inland flood hazards, inconsistency with City standards, and impacts arising from possible groundwater contamination. These impacts are therefore considered significant, but mitigable. Remaining hydrology/water quality impacts of flooding from storm drain overflow, erosion from flooding, and siltation/chemical contamination require additional information before their impact significance or mitigation feasibility can be adequately addressed. These potential impacts therefore remain significant and not mitigated at the plan level.

### **3.3 VISUAL AESTHETICS/COMMUNITY CHARACTER**

The City of Chula Vista bayfront is an integral part of the San Diego Bay shoreline by virtue of its location and landform. The bayfront is highly visible to southbound travelers on I-5 and will have a similar high visibility from State Route 54, planned for completion in the early 1990s. The City's strategic location adjacent to these federal and state highway systems and between the City of San Diego and Mexico makes the bayfront a visual resource of statewide importance. The City's bayfront also represents a unique and highly limited scenic resource to the City, having a profound effect on the City's image as a bay community as well as on its water-related aesthetic amenities and the regional attraction of tourism.

One of the most tangible effects of any new development is its appearance in the landscape. Visual appropriateness often becomes the standard by which many projects are judged regardless of how much attention has been paid to other critical environmental factors. As such, the aesthetic assessment for the LCP Resubmittal analyzes the character and form of the existing landscape and the proposed project and alternatives. Principal criteria that are considered in this study include the following:

- The spatial relationship of the assumed land uses within the site and surrounding area
- The conformance of the proposed project and alternatives with the planning issues and goals previously identified in the Chula Vista Bayfront Specific Plan and General Plan Update
- The degree to which the proposed project and alternatives preserve important bay views from major state travel routes and local city thoroughfares
- The degree to which the proposed project and alternatives will enhance or create new scenic public views
- The degree to which the proposed project and alternatives will complement the site's shoreline location and the visual character and identity of the City of Chula Vista

#### **Existing Conditions**

#### **Landscape Character**

#### **Project Site**

The LCP Resubmittal project area varies from landscapes and water features of natural scenic quality to abandoned land uses that are currently in a state of deterioration. In addition, the LCP Resubmittal area includes two parallel lattice steel tower transmission lines that create an industrial character on the eastern edge of the site. The San Diego Bay, in conjunction with the Sweetwater Marsh, Vener Pond and Gunpowder Point dominate the character of the Midbayfront and the National Wildlife Refuge portion of the project area.

Open scenic views to the San Diego Bay, marshlands and tidal marsh waterways are afforded in these localities. During the winter and spring seasons, the area also supports numerous migratory shorebirds and waterfowl which contribute to the public's visual interest and enjoyment of the bayfront. Public access to this part of the LCP site is currently limited to public transit accessing the Sweetwater Marsh National Wildlife Area and the City's Nature Interpretive Center, located on Gunpowder Point. Overall, the scenic quality of the northern and western parts of the LCP area is high.

The Midbayfront subarea itself is characterized as a relatively flat and uniform upland that is presently undeveloped and retains remnants of previous historical farming and commercial activities. Abandoned nurseries and an abandoned restaurant are found in the central and southwestern parts of the site. Industrial uses are significant visual factors along the site's eastern edge and southeastern corner, where the SDG&E powerlines and Rohr facilities are found. Except for the Rohr facilities and "F" Street, access to the Midbayfront is also currently restricted by the controlled access fences and gates along "E" Street and a lack of roads through the remainder of the Midbayfront site. Figure 3-II shows locations of important natural and land use features that influence the landscape character of the LCP Resubmittal area.

#### Surrounding Area Landscape

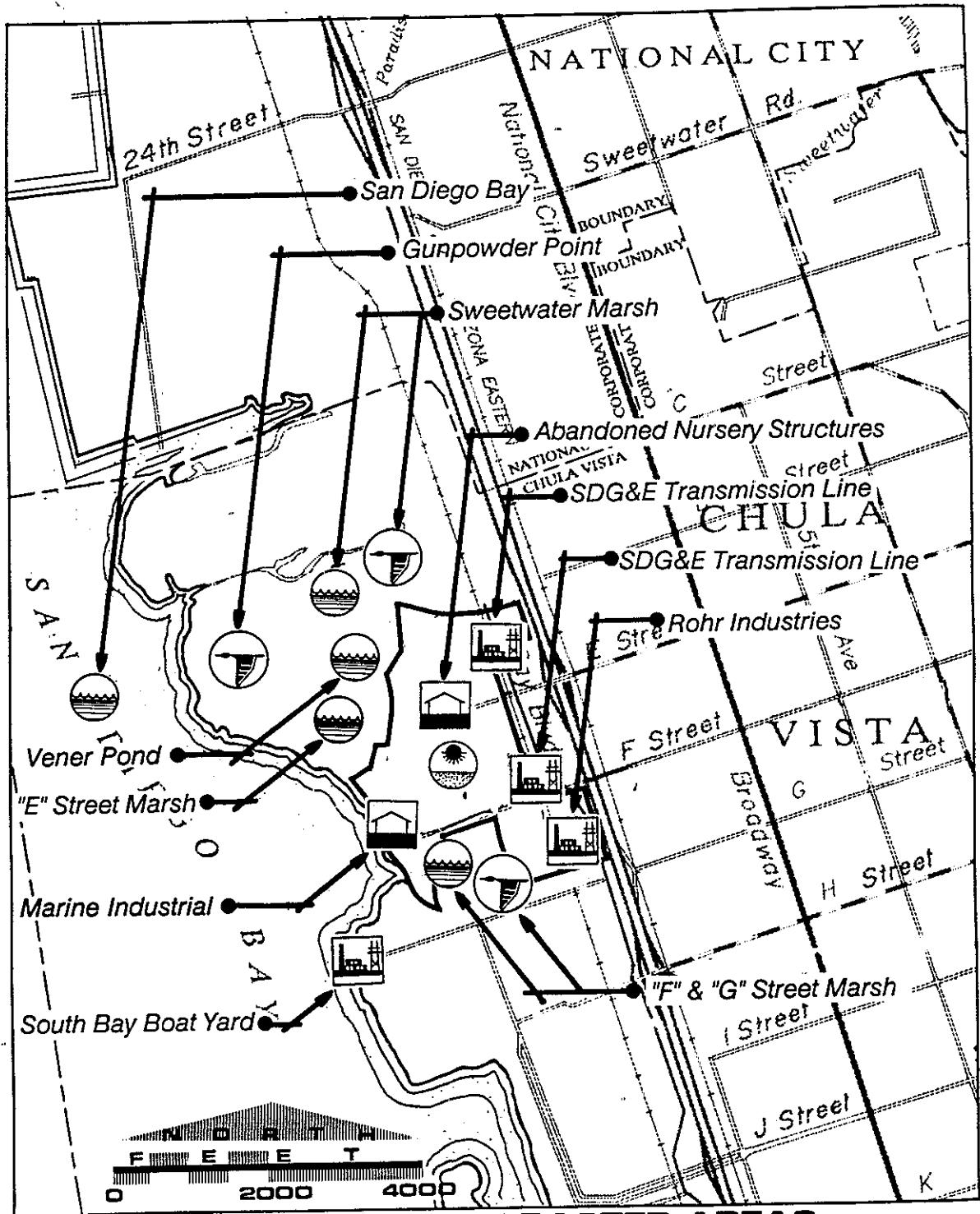
The predominantly open and undeveloped character of the LCP Resubmittal area differs significantly from other nearby bayfront areas to the north and south. Areas north of the LCP are predominantly marine-related industrial in character with representative visible uses, including the Naval Ship Yard in National City. Distant views to downtown San Diego and the Coronado Bay Bridge are also afforded to the north. To the south, the visual character is also predominantly industrial, with views to the Southbay Boat Yard, Rohr Industries and SDG&E Southbay Power Plant. The visual characteristics associated with these industrial areas include the presence of large scale or massive structures which partially obscure views to the bay in these directions.

With respect to the City of Chula Vista, the urban area lies east of the project site and I-5. Urban uses in the western part of the City closest to the Midbayfront consist primarily of low-profile one- and two-story structures that are predominantly residential and commercial. Within the downtown section, located approximately one mile east of the project site, the overall urban character of the City remains predominantly low profile, with taller buildings typically being three to four stories. The 16-story Congregational Towers located at Third Avenue, represents one of the few visually prominent structures in the City.

#### Viewshed Characteristics

While access and views to the bayfront are possible at the present time, City of Chula Vista residents are largely separated from the waterfront, visually because of topography and urban form, and physically because of I-5 and controlled access conditions on site. A viewshed is defined as an area from which at least a portion of a site can be seen. For the purposes of the LCP Resubmittal, the viewshed analysis focuses on the Midbayfront subarea proposed for development. At the present time, this subarea has elevations ranging from

**REPORT  
SUMMIT  
#8**



**LANDSCAPE CHARACTER AREAS**

**Open Space & Natural Scenic Areas**

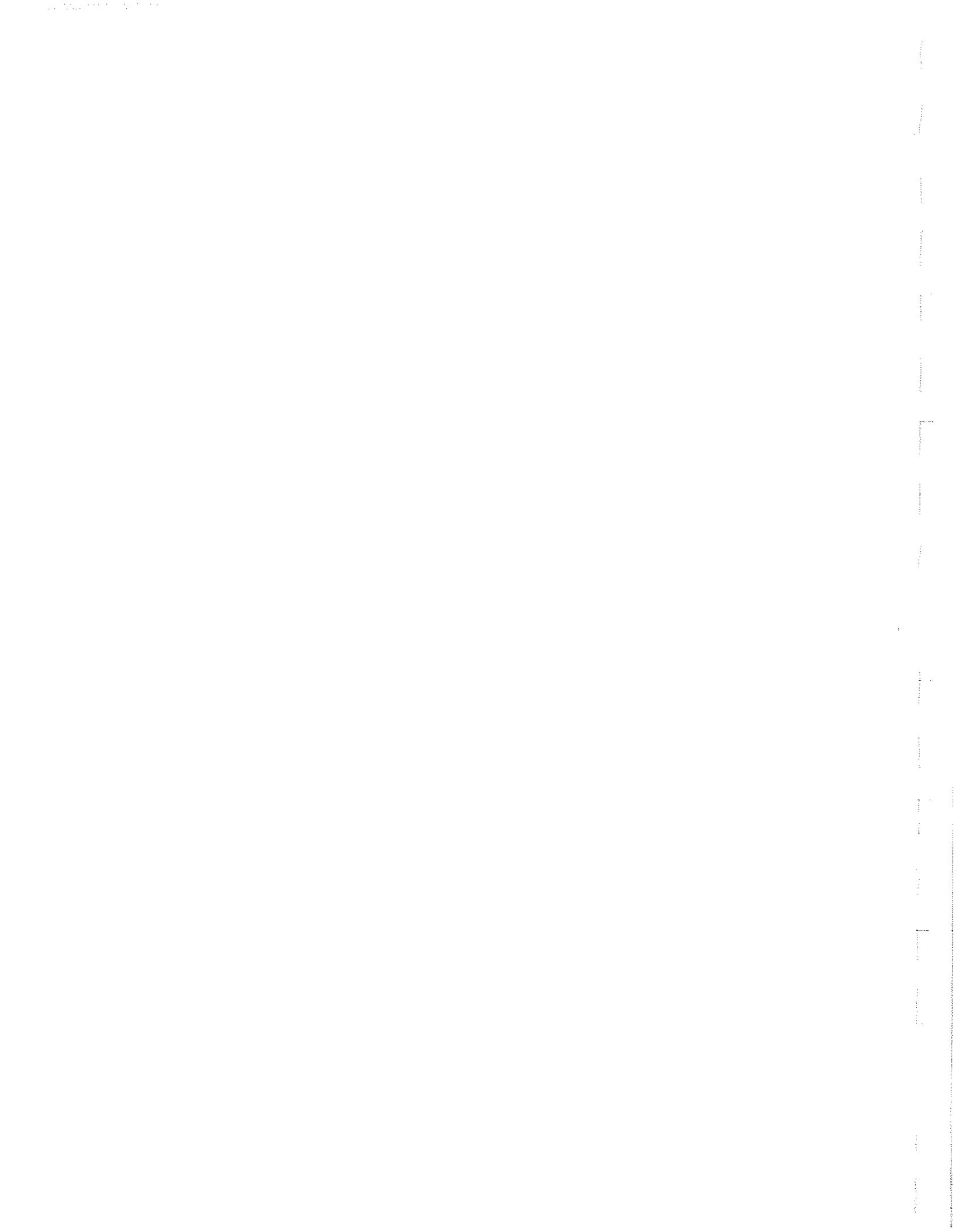
- **Natural Water Features**
- **Undeveloped/Wildlife Preserves**
- **Undeveloped/Vacant & Abandoned Agriculture**

**Industrial Developed Areas**

**Dilapidated Buildings & Degraded Areas**

**EXISTING VISUAL CONDITIONS**

Figure 3-II



0 to 23' above mean sea level (MSL). To the east of the site and I-5, elevations within the City of Chula Vista range from 23' above MSL to 100' near the downtown center of the City. Further to the east, elevations continue to rise gradually, with elevations reaching 300' near I-805. Cumulatively, the low urban profile of the City in conjunction with the flat and low elevations of the bayfront result in a project viewshed that is significantly constrained to the immediate project vicinity. Figure 3-III shows the project viewshed limits.

View corridors to the bayfront are primarily afforded along "E" and "F" Streets from approximately Fifth Street. The closest and most unobscured views to the site and bayfront are provided along Bay Boulevard and from the commercial establishments that are located on the east side of this street. Commercial uses providing scenic views to the bayfront include Anthony's Restaurant, the Soup Exchange Restaurant, El Torito Restaurant and the Day's Inn Motel and Restaurant. Intermittent views to the bay are also possible from low hills located two and one-half to three miles to the east. Residential viewers are found in these viewing locations.

From viewing locations north and south of the LCP area, current site visibility is constrained to a distance no greater than one and one-half miles. The project site is primarily visible to southbound travelers along I-5 from approximately 24th Street in National City. At approximately this location, existing westward industrial views open to the San Diego Bay and Sweetwater Marsh. Existing freeway signage for the City of Chula Vista also occurs at this location, and creates a visual gateway for the City. From the north, the City is also visible to park visitors at L.M. Pepper Park, located approximately one mile north of the Midbayfront Project site. From the South, the Midbayfront's visibility is significantly restricted by industrial uses such as the SDG&E Southbay Power Plant, as well as landscaping along I-5. To northbound I-5 travelers, views to the site become possible only in the immediate vicinity of the project, north of "E" Street.

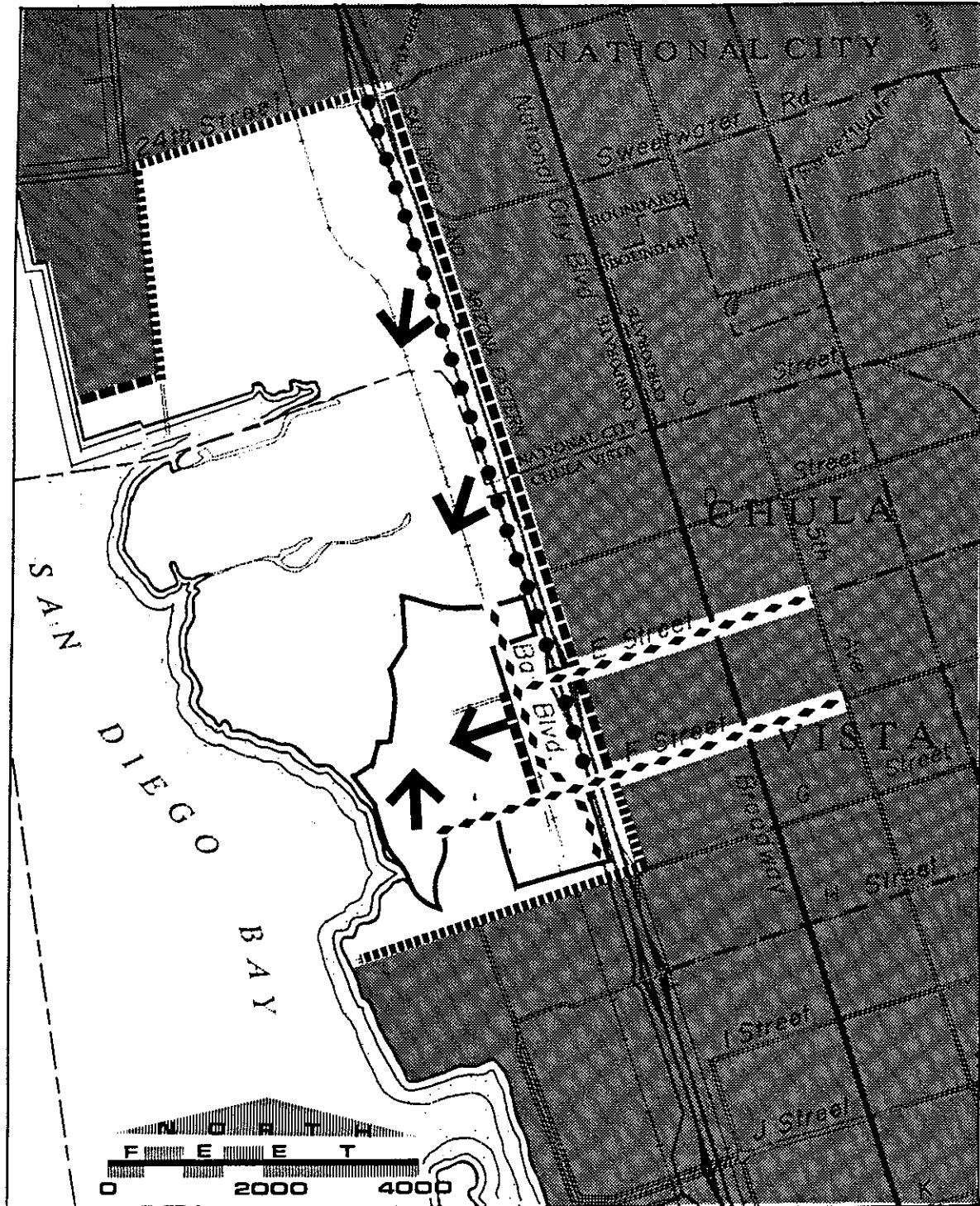
#### **Viewpoints Selected for Detailed Analysis**

Nine viewpoint locations were selected for detailed analysis (see Figure 3-IV). Viewpoints were selected based upon the type of existing and future viewing locations of the Midbayfront site and San Diego Bay that are or will be available to the public when the project is completed. The first six viewpoints are off-site existing public viewing locations that are available to local Chula Vista residents or regional freeway travelers. Viewpoints seven through nine are future public viewing opportunities that would be created by the proposed project and alternatives. The following is a brief description of each.

| No. | Viewpoint                              | Description                                                                                                                                         |
|-----|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Chula Vista Nature Interpretive Center | Representative view east and southeast into the Midbayfront, for visitors to the Sweetwater Marsh National Wildlife Refuge and Interpretive Center. |



# JCPA RESUBMITTAL #8



## VIEWSHED CHARACTERISTICS

==== Intensive View Corridors

..... Obstructed View Corridors

Project Viewshed

## VISIBILITY FROM ROADWAYS

• • • • Interstate 5

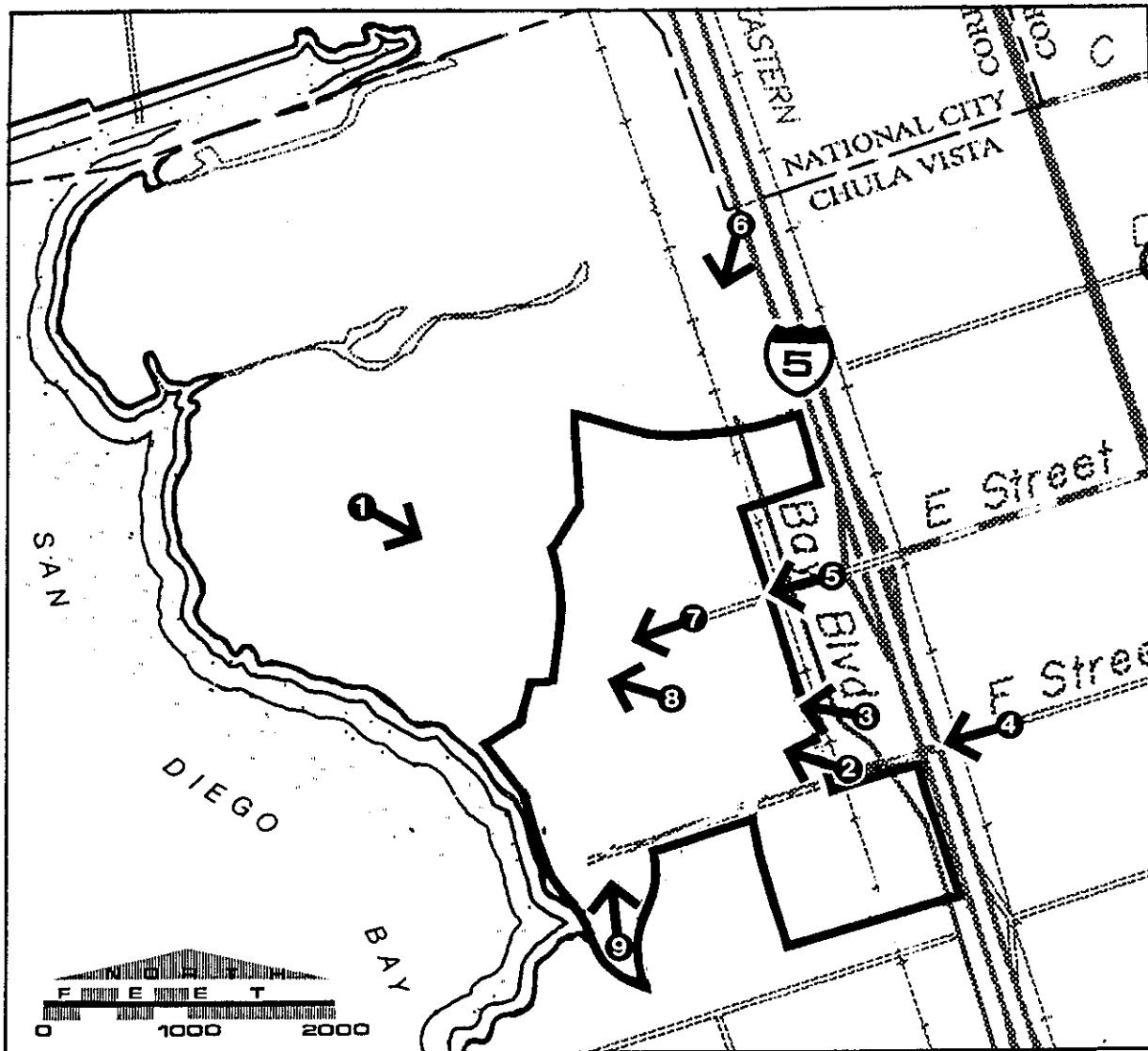
- - - - Local Roads: Bay Blvd., E St. and F St.

VISIBILITY CONDITIONS

Figure 3-III



REPORT SUBMITTED #8



- KOP#1 - Chula Vista Nature Interpretive Center**  
view E to SSE
- KOP#2 - "F" Street**  
view W to NW
- KOP#3 - Bay Blvd./Soup Exchange**  
view W
- KOP#4 - "F" Street at Woodlawn**  
view SSW
- KOP#5 - "E" Street at I-5**  
view SSW to WNW
- KOP#6 - I-5**  
view SSW
- KOP#7 - Marina Parkway**  
view WSW
- KOP#8 - Extended Stay Resort**  
view W to NNW
- KOP#9 - Marina Pkwy./Public Park**  
view WNW to N

KEY OBSERVATION POINTS



|   |                                                |                                                                                                                                                                                  |
|---|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | "F" Street                                     | Representative view from major entrance to the proposed project site, for daily commuters to Rohr Industries and visitors.                                                       |
| 3 | Bay Blvd./Soup Exchange                        | Representative views from eastern viewshed boundary where currently the best City views of the bayfront are available for Chula Vista residents and tourists.                    |
| 4 | "F" Street at Woodlawn                         | Viewpoint from view corridor within residential section of Chula Vista.                                                                                                          |
| 5 | "E" Street at I-5                              | Viewpoint from "E" Street, regarded as the most heavily used local City view corridor to the site.                                                                               |
| 6 | I-5 Viewpoint for southbound travelers on I-5. | This viewpoint is representative of existing site exposure to regional population.                                                                                               |
| 7 | Marina Parkway                                 | Proposed roadway view corridor looking west toward the San Diego Bay. This would be the major through road for visitors to the project.                                          |
| 8 | Extended Stay Resort                           | Elevated roof top views to the San Diego Bay from proposed semi-public use area.                                                                                                 |
| 9 | Marina Parkway/Public Park                     | Representative view from southwestern edge of the project site where closer views to the San Diego Bay will be possible from park areas and northbound Marina Parkway travelers. |

Each viewpoint was photographed and perspectives of the proposed project and alternatives were computer generated as overlays utilizing the XYZ-3D perspective plot program, developed by Aariac Corporation. A number of assumptions were used in the development of the perspectives, including the following:

- Elevations, including ground elevations and building elevations, determined by the Jerde Partnership, were used for the proposed project
- Building elevations provided by Cinti for the reduced density alternatives (alternatives 3, 4 and 5) were used
- Building locations and elevations for the LCP alternative were provided by Cinti and refined by KEA for purposes of the alternatives analysis and comparison
- Ground elevations for all the alternatives were assumed to be the same as for the proposed project

- Computer-generated color simulations were developed by KEA for Viewpoint 1 (Nature Interpretive Center) in order to provide the reader with a representation of the architectural design being considered by the developer. Renderings provided by the Jerde Partnership were used as a basis for the color simulations. Final design decisions are not being made as part of the LCP Resubmittal, however (see Plates 1, 2 and 3, located at the end of this section)
- Building height assumptions are shown on Table 3-I
- Building mass, height, and bulk are the primary aesthetic issues being addressed in this EIR since detailed architectural design is not incorporated into the LCP Resubmittal. Similarly, other aesthetic effects resulting from landscaping, cars and parking lots are not included in the assessment. Plates 4 through 20 show the perspective plots for the proposed project and alternatives from each of the viewpoints evaluated

It should be noted that the photographic panoramas shown on Plates 4 through 19 contain some distortions in the lateral perspective. Specifically, photographic pans tend to stretch out, or lengthen, the landscape in a horizontal direction. Consequently, while the computer generated buildings are of correct height, mass and relative placement to one another, actual placement in the landscape will differ slightly, with less background view possible than shown on these plates.

#### Criteria For Evaluation

Three criteria were used to evaluate the potential adverse effects of the Midbayfront development on the existing public views to the bayfront:

1. To what extent would the development obstruct public views to the bayfront? Impacts are considered significant where the proposed project or alternatives would totally, or almost completely, obstruct existing public views to the bayfront.
2. To what extent would the development visually dominate, or aesthetically degrade the environmental quality of natural resource protection areas? Impacts are considered significant where the proposed project or alternatives would create a visually dominant urban landscape from a designated natural area and associated viewpoints that have been developed for the public's education and aesthetic appreciation of the Chula Vista bayfront and marshes.
3. To what extent would the development be visually compatible with the site's shoreline location and complement the City of Chula Vista's urban form and community character? Impacts are considered significant where the proposed project or alternatives would create a dominant urban form that strongly contrasts with the existing community profile and character. Factors considered in this assessment include proposed building heights and densities

Table 3-1

**Building Height Assumptions  
for Selected Project Facilities**

| <b>Building</b>                                     | <b>Proposed<br/>Project</b> | <b>Alt. 2</b> | <b>Alt. 3</b> | <b>Alt. 4</b> | <b>Alt. 5</b> |
|-----------------------------------------------------|-----------------------------|---------------|---------------|---------------|---------------|
| Resort Hotel                                        | 265'                        | NA            | 177'          | 195'          | 142'          |
| Luxury Hotel                                        | 120'                        | NA            | 16'           | NA            | NA            |
| Atrium Hotel                                        | 265'                        | NA            | 265'          | 265'          | 142'          |
| Extended Stay Hotel                                 | 172'                        | NA            | 137'          | 172'          | 137'          |
| Residential above<br>Commercial retail<br>(central) | 71-75'                      | NA            | 51'           | 55'           | 16'-29'       |
| Residential<br>(north)                              | 39-176'                     | 25-44'        | 25-167'       | 25-167'       | 25-132'       |



compared with the City's long-standing policies and goals for urban development. Also included in these criteria is consideration for the degree to which the proposed project and alternatives would provide a visual and/or design link between the project site and the City as a whole, thereby facilitating the visual image of the City as a waterfront community.

In addition, it is important to recognize that the Midbayfront project and alternatives would have beneficial aesthetic effects. The following three questions were considered in the assessment of beneficial effects:

1. To what extent would the project enhance existing scenic views through the elimination of currently degraded structures?
2. To what extent would the development facilitate the public's aesthetic enjoyment of the bayfront through the creation of public open space and scenic viewing opportunities?
3. Finally, what are the likely cumulative adverse and beneficial effects to bayside views and community character to the City of Chula Vista and other waterfront properties?

Each of these factors is considered in the assessment of potential impacts from the nine KOPs. The following section addresses the impacts of the proposed project and Alternatives 1 through 5. Alternatives 8 and 9 are described in the DEIR, Volume 1, Sections 4.2.3 and 5.2.3, respectively.

### Impacts

#### **KOP No. 1 - Sweetwater Marsh National Wildlife Refuge/Chula Vista Nature Interpretive Center**

##### Characteristics of Existing Views

The Chula Vista Nature Interpretive Center has two viewpoints -- one overlooking the Sweetwater Marsh adjacent to the petting tank and one elevated viewpoint that overlooks the San Diego Bay and Gunpowder Point. KOP No. 1 is the overlook to the Sweetwater Marsh in the direction of the proposed Midbayfront development.

Existing views from this observation point are panoramic and open (see Plate 1). In the foreground is the Sweetwater Marsh and Vener Pond, where the visitor can view the wetlands habitat and seasonal waterfowl that are protected by the National Wildlife Refuge. In the middleground and background distance zones, views are to the SDG&E lattice transmission lines, I-5 and the City of Chula Vista residential areas and commercial uses. Overall, the quality of the views from this KOP are dominated by the foreground natural environmental features and wildlife activities.

## Proposed Project Effects

The proposed project would introduce urban forms within the foreground distance zone of this KOP (Plate 1). Closest to the observation point would be the high- and low-rise apartments (176' and 16') that would be located approximately 1,300' east and southeast of the Interpretive Center. To the southeast, other project buildings would also be visible; including the specialty retail with four stories of residential above (71'), the Extended Stay Hotel (172'), the Atrium Hotel (265'), the Luxury Hotel (120'), the Resort Hotel (265'), low rise apartments (35') and the bungalows (16'). Cumulatively, the proposed structures will form a solid urban mass that will eliminate current views to the SDG&E powerlines, I-5 and the City of Chula Vista. The proposed project will be visually and aesthetically dominant from this viewpoint, with the current wetlands and wildlife habitat providing immediate foreground diversity (see Plate 1). The visual/aesthetic impacts from this viewpoint are considered significant since the project will change the overall character of the view from a predominantly natural and scenic wetlands setting to one of intense urban development.

## Alternative Effects

Alternative 1 (No Project) - The no project alternative would maintain the existing setting from the Chula Vista Interpretive Center as it is currently. No impacts are identified for this alternative (Plate 1B).

Alternative 2 (Existing LCP) - The existing LCP alternative would create a low profile urban form within the foreground viewing distance of the Interpretive Center. With the current LCP height limitations, buildings ranging from 25' to 70' in height would not create significant visual impacts from this viewpoint. The natural marsh and wetlands landscapes would continue to co-dominate the visual character of the natural preserve area (Plate 2A).

Alternative 3 (Reduced Density 1) - This alternative would reduce the height of the apartments closest to the Nature Interpretive Center from 176' to 167', as well as the specialty retail/residential from 71' to 51'. Overall, visual impacts to the Interpretive Center would be similar to and only slightly less than those identified for the proposed project. As such, visual impacts are considered significant (Plate 2B).

Alternative 4 (Reduced Density 1A) - Similar to Alternative 3, Alternative 4 would further reduce the height of the apartments closest to the Nature Interpretive Center (from 176' to 132' and 167'). Height reductions would also occur to the Resort Hotel (from 265' to 195'). Overall, however, the visual dominance of the project alternative from the Interpretive Center would be similar to that described for the proposed project (Plate 3A).

Alternative 5 (Reduced Density 2) - This alternative would reduce the height of the apartments closest to the Nature Interpretive Center, from 176' to 132'. Alternative 5 would also reduce the height of the Extended Stay Hotel (from 172' to 137'), the Resort Hotel and Atrium Hotel (from 265' to 142'), and the specialty retail/residential (from 71' to 16'-29'), as well as eliminate the Luxury Hotel. Overall, the visual impacts of Alternative 5 are substantially less than those of the proposed project. Significant visual

impacts would still result, however, due to visual dominance created by the 132' apartment buildings in the foreground viewing distance of the Interpretive Center (Plate 3B).

#### **KOP No. 2 - "F" Street at the Midbayfront Project Boundary**

##### **Characteristics of Existing Views**

KOP No. 2 provides open and expansive views to the San Diego Bay in a northerly direction (Plate 4). Within the immediate foreground, views are to SDG&E powerlines, undeveloped upland vegetation and dilapidated agricultural structures. In the middleground, the Chula Vista Nature Interpretive Center and San Diego Bay are visible. In the far distance are views to downtown San Diego. The predominant character of the existing views is natural with high scenic quality attributes.

##### **Proposed Project Effects**

A view corridor to the bay will remain at the end of "F" Street. The proposed project will obstruct views to the north, however, including views to the Nature Interpretive Center and downtown San Diego (see Plate 4). The project will also eliminate the remaining agricultural structures and abandoned restaurant, thereby improving the aesthetic setting in this manner. Structures that will be visually dominant from this viewpoint include the Extended Stay Hotel (172'), Resort Hotel (265') and the Atrium Hotel (265'). Within the immediate foreground will be the "F" Street Gateway, child care center and ice rink. Rohr Industry buildings will also be visible directly to the south (75' ~~42'~~ and 113'). Cumulatively, the proposed project will create a strong and dominant urban form of greater scale than surrounding developments. Views to the bay at the end of "F" Street will retain natural scenic water elements from this viewpoint (see Plate 4A).

While the proposed project will substantially change the visual character of views from "F" Street, overall the impacts are not considered significant. Views to the bay will be maintained, and dilapidated areas will be renovated. In addition, the proposed development in this immediate area will be similar in scale to industrial developments to the south (e.g., Rohr). As such, impacts to urban form at this KOP are considered to be adverse but not significant.

##### **Alternative Effects**

Alternative 1 (No Project) - The no project alternative would retain the existing setting from "F" Street. Existing scenic views to the bay, as well as views to dilapidated structures, would remain. As there would be no change to the existing conditions, no impacts are identified for the no project alternative (Plate 4B).

Alternative 2 (Existing LCP) - The existing LCP would have impacts on views to the bay similar to those identified for the proposed project. These impacts are not significant since a view corridor would be maintained. With respect to urban form and dominance, however, the existing LCP would avoid the impacts identified for the proposed project. Height

limitations for the LCP range from 25' to 70' and would be consistent with nearby commercial and residential developments (Plate 5A).

Alternative 3 (Reduced Density 1) - This alternative would reduce the height of the Resort Hotel and Extended Stay Hotel in comparison to the proposed project. Overall, however, visual impacts would be similar in type and degree to the proposed project (Plate 5B).

Alternative 4 (Reduced Density 1A) - Impacts of Alternative 4 would be similar to those described above for Alternative 3 (Plate 6A).

Alternative 5 (Reduced Density 2) - Impacts of Alternative 5 would be similar in type and degree to those described above for Alternative 3 (Plate 6B).

### **KOP No. 3 - Bay Boulevard/Soup Exchange**

#### Characteristics of Existing Views

KOP No. 3 is representative of views along Bay Boulevard and from commercial visitor establishments that provide views to the bayfront. Overall the quality of views along Bay Boulevard are open and expansive, similar to KOP No. 2 (Plate 7). Elevated views to the San Diego Bay are provided from the Soup Exchange. Within the immediate foreground are the SDG&E powerlines and undeveloped uplands. Several dilapidated structures are also currently seen along this roadway. Overall, the quality of the views is high, with views to the San Diego Bay dominating the character of the area.

#### Proposed Project Effects

The proposed project will obstruct almost all views currently afforded from this KOP (as well as along the rest of Bay Boulevard). The proposed project will create a high density urban form in its place, with the most prominent structures including the Extended Stay Hotel (172'), Resort Hotel (265') and Atrium Hotel (265') (Plate 7A). In the immediate foreground will be sports center facilities including tennis, racquetball and volleyball courts. The sports facilities will be in scale with the existing structures, although the higher hotels in the background will be visually dominant due to their height and mass.

The visual impacts from KOP No. 3 are considered to be significant since almost all bay views will be eliminated, and the project will visually dominate from the existing commercial/resort establishments.

#### Alternative Effects

Alternative 1 (No Project) - The no project alternative would result in the continued visibility of the bay from commercial establishments along Bay Boulevard. Existing scenic views to the bay, as well as views to dilapidated structures, would remain. No impacts are identified for the no project alternative (Plate 7B).

Alternative 2 (Existing LCP) - The existing LCP would partially block bay views due to the presence of planned residential and commercial uses. Due to the low profile of these buildings (25' to 44'), the existing LCP would permit greater visibility to the bay, and would not create an urban form on the bayfront that is dissimilar to other City and bayfront development. As such, impacts from the existing LCP are not considered to be significant (Plate 8A).

Alternative 3 (Reduced Density 1) - Visual impacts from this alternative would be similar in type and degree to those described for the proposed project (Plate 8B).

Alternative 4 (Reduced Density 1A) - Visual impacts from this alternative would be similar to those described for the proposed project (Plate 9A).

Alternative 5 (Reduced Density 2) - Visual impacts from this alternative would be less than those from the proposed project due to the reduced building heights of the Atrium Hotel (142'), Resort Hotel (142') and Extended Stay Hotel (137'). However, bay views will be obscured, and visual impacts are considered to be significant and similar to those described for the proposed project (Plate 9B).

#### **KOP No. 4 - "F" Street at Woodlawn**

##### Characteristics of Existing Views

KOP No. 4 is one of the main view corridors to the bay that currently exists within the City of Chula Vista. The other view corridor is along "E" street and is discussed under KOP No. 5.

Along "F" street, from approximately Fifth Avenue westward, the visual experience combines a sense of the bay with the adjacent residential and commercial development (see Plate 10). From Woodlawn, the bay is visually evident and provides the community a link to its bayfront identity. The view corridor is limited by existing development on "F" Street, with other seen features including adjacent residential developments, distribution power lines and the railroad tracks and signal. Overall, the character of this area is one of a low-profile medium density residential community.

##### Proposed Project Effects

The existing view corridor westward along "F" Street will be maintained with the proposed project. None of the buildings will obstruct views from this location. Higher structures will be visible from the road, however, including the Rohr Building (113') and the Atrium Hotel (265'). Most other lower buildings will be visually screened by the existing urban development of the city as well as the lower ground elevations of the proposed buildings (see Plate 10A). The aesthetic impacts of the proposed project are not significant with respect to obstruction of bay views, since open visibility to the bay will be maintained. Aesthetic impacts related to the visual compatibility of the project with the surrounding City's urban form are also not considered significant. While the project's high-rise Atrium

Hotel will create a visible and strong urban focal point, this singular structure will not dominate the City's character from this location.

#### Alternative Effects

Alternative 1 (No Project) - No impacts are identified from this viewpoint as no changes to the existing setting would result (Plate 10B).

Alternative 2 (Existing LCP) - ~~Development under~~ the existing LCP would not be visible from this viewpoint, and as such, no impacts are identified for this alternative (Plate 10C).

Alternative 3 (Reduced Density Alternative 1) - This alternative would create a strong urban focal point in the direction of the bayfront, including visibility to the 265' Atrium Hotel, as well as the Rohr Expansion Facilities. Overall, impacts to bay views would be insignificant due to the view corridor that will remain. Insignificant impacts to the City's aesthetic and urban form image would also result since only the high-rise Atrium Hotel will be visually prominent from this location. These impacts are similar to those described for the proposed project (Plate 11A).

Alternative 4 (Reduced Density Alternative 1A) - Impacts would be similar to those described above for Alternative 3 (Plate 11B).

Alternative 5 (Reduced Density Alternative 2) - This alternative would have significantly lower visual/aesthetic impacts than the proposed project. The reduced height of the Atrium Hotel (from 265' to 142') would have a minor effect on the City's urban form and image (Plate 11C).

#### **KOP No. 5 - "E" Street at I-5**

##### Character of Existing Views

From "E" street west of I-5, the existing views are semi-open to the San Diego Bay. From this location, abandoned agricultural structures are in the immediate foreground and partially obstruct views to the bay (see Plate 12). With the removal of these structures, the views would be open and panoramic, similar to KOPs No. 2 and 3. Also within the immediate foreground are the SDG&E powerlines. The City of Chula Vista Nature Interpretive Center and Gunpowder Point are visible in a northwest direction, and the Southbay Boat Yard can be seen to the south. Overall, the views from KOP No. 5 are predominantly natural and are of potentially high scenic quality.

##### Proposed Project Effects

The proposed project will retain a view corridor to the bay in a westerly direction, however, the other existing open and panoramic views will be replaced with views to the development (see Plate 12A). As part of the project, the existing dilapidated structures currently in the foreground will also be replaced.

The proposed project will exert a strong and dominant urban influence on the site. The high density of the proposed buildings will create an urban wall from this location. The high-rise buildings including the apartments (176'), Atrium Hotel (265'), Resort Hotel (265') and Extended Stay Hotel (172'), will be visually dominant and of a greater vertical scale than existing urban forms in the City.

Visual impacts to bayside views are not considered significant since a view corridor will be retained. Aesthetic impacts on community urban form and image are considered significant, however, since the project will create an urban landscape that will, from the City's major transportation corridor, dominate the character and image of the City, a low profile, residential, suburban character.

#### Alternative Effects

Alternative 1 (No Project) - No impacts are identified from this viewpoint since no changes to the existing setting would result. Existing bayside views, and views to nearby dilapidated agricultural structures would remain (Plate 12B).

Alternative 2 (Existing LCP) - The existing LCP would have similar effects on visibility to the bay as described above for the proposed project. Overall, a view corridor to the bay would be retained, and impacts to views are considered insignificant. The impacts of the LCP on urban form and character are considered to be insignificant, due to the compatibility of the alternative structure's heights with other City development (Plate 13A).

Alternative 3 (Reduced Density Alternative 1) - This alternative would have similar impacts as the proposed project on view corridors. Impacts to urban form and character would be similar, but somewhat greater, than those of the proposed project due to the location of the apartment buildings closer to "E" Street and I-5. Impacts to urban form and character are considered to be significant (Plate 13B).

Alternative 4 (Reduced Density Alternative 1A) - This alternative would have visual impacts similar to those described above for Alternative 3 (Plate 14A).

Alternative 5 (Reduced Density Alternative 2) - This alternative would have visual impacts similar to those described above for Alternative 3 (Plate 14B).

#### **KOP No. 6 - I-5 Southbound**

##### Characteristics of Existing Views

Interstate-5 southbound provides the greatest view to the site to regional travelers and tourists passing through the area. From San Diego southward, the existing views along I-5 consist of a mixture of industrial and open space uses. Industrial uses viewed from the interstate are concentrated north of this viewpoint in the vicinity of National City. Visually, the industrial uses seen from the interstate appear massive in scale and attract attention. At KOP No. 6, existing views open to the Chula Vista bayfront and the Sweetwater Marsh (see Plate 15). These views provide a visual gateway for the City that contrasts significantly

with previous industrial roadside views immediately to the north. Overall, the views are scenic in that they provide one of the few opportunities to see the bay or open coastline in southern San Diego County. As with other viewpoints, the existing lattice powerlines are visually evident in the foreground of this KOP.

### Proposed Project Effects

The proposed project will be visually prominent from this viewpoint as shown on Plate 15A. High-rise structures that will be visually dominant include the high-rise apartment buildings, the Atrium Hotel, the High-rise Residential and the Resort Hotel. The proposed project will partially obstruct the existing views; however, open views to the bay will still be evident as well as to the Chula Vista Interpretive Center. Overall, the project will be visually dominant from the interstate and will attract motorists' attention. Visual impacts to bayfront views are not considered significant since views to the bay and Sweetwater Marsh will be maintained. Significant impacts will result to the City's urban form and image as a bayfront community. The project will be visually dominant and create a large-scale and dense urban area that will contrast significantly with the City's existing downtown and community character.

### Alternative Effects

Alternative 1 (No Project) - No impacts are identified from this viewpoint since no changes to the existing visual setting would result. Existing views to the Sweetwater Marsh and San Diego Bay would remain (Plate 15B).

Alternative 2 (Existing LCP) - The existing LCP would have effects on visibility to the bay similar to those described above for the proposed project. Overall, views to the bay would be partially retained, and impacts to views are consequently considered to be insignificant. The impacts of the LCP on urban form and community character are considered to be limited since the LCP structure heights are compatible with other City development (Plate 15C).

Alternative 3 (Reduced Density Alternative 1) - Alternative 3 would have impacts on views to the San Diego Bay and Sweetwater Marsh similar to those described above for the proposed project. Impacts to bay views are considered to be insignificant since open views will still be afforded along portions of I-5. Impacts upon the urban form and aesthetic character of the City of Chula Vista are assessed to be significant and somewhat greater than those described for the proposed project. Due to the siting of the apartment buildings, this alternative would create greater and more massive urban form changes than the proposed project (Plate 16A).

Alternative 4 (Reduced Density Alternative 1A) - Visual impacts associated with this alternative are similar to those described above for Alternative 3 (Plate 16B).

Alternative 5 (Reduced Density Alternative 2) - Visual impacts of this alternative are similar to those described above for Alternative 3 (Plate 16C).

## **KOP No. 7 - Marina Parkway**

### Characteristics of Existing Views

At the present time, KOP No. 7 is located in a central section of the Midbayfront where access and public views do not exist. As shown on Plate 17A, the existing landscape character is undeveloped uplands in the foreground, San Diego Bay in the middleground, and the Coronado Silver Strand in the background. Cumulatively, the existing landscape features are expansive, open, and very flat in profile. Existing structures seen in this direction include the Nature Interpretive Center to the north, the Southbay Boat Yard and abandoned restaurant and warehouses to the south, and a single wood-pole utility line in the center. Scenic quality is potentially high due to the proximity of the viewpoint to the bay.

### Proposed Project Effects

As shown on Plate 17B, a central view corridor to the San Diego Bay will be retained with the proposed project development. Adjacent to the parkway, several buildings will be visually prominent, including retail specialty shops and residential to the north, and low (39' and 44') and high-rise apartments (176') to the south. As such, the views from this viewpoint will combine strong urban and natural scenic elements. The potential visual effects of the project are beneficial from this KOP since public views to the bayfront will be created and currently dilapidated areas will be improved aesthetically.

### Alternative Effects

Alternative 1 (No Project) - No adverse or beneficial impacts are identified for this alternative since the viewpoint does not exist.

Alternative 2 (Existing LCP) - This alternative would have beneficial visual impacts similar to those described above for the proposed project.

Alternative 3 (Reduced Density Alternative 1) - This alternative would have beneficial visual impacts similar to those described above for the proposed project.

Alternative 4 (Reduced Density Alternative 1A) - This alternative would have beneficial visual impacts similar to those described above for the proposed project.

Alternative 5 (Reduced Density Alternative 2) - This alternative would have beneficial visual impacts similar to those described above for the proposed project.

## **KOP No. 8 - Elevated Views from the Extended Stay Hotel Restaurant**

### Characteristics of the Existing Views

At the present time, KOP No. 8 does not exist since there are no opportunities to view the landscape from this elevated location. Views shown on Plate 18 were taken from a

helicopter at an approximate height of 150', where a high rise restaurant may be located in the proposed project.

### Proposed Project Effects

Views from the high-rise buildings at approximately 150' from the surface are depicted on Plate 18. Views will be panoramic and expansive, providing visibility to the Coronado Islands to the south, San Diego Bay, downtown San Diego, Coronado and Coronado Bridge. In the background, other landmark features such as Point Loma will also be visible. In the foreground, proposed buildings also seen will include the Resort Hotel, the Luxury Hotel, apartments located over the specialty retail, the salt water lagoon and the bungalows. Overall, the project will create viewpoints of high scenic interest and diversity. The proposed project will have a beneficial effect on visual quality through the creation of unique panoramic views not currently available to the public.

### Alternative Effects

Alternative 1 (No Project) - No adverse or beneficial visual impacts are identified for this alternative since the viewpoint does not exist.

Alternative 2 (Existing LCP) - This alternative would not provide the beneficial effects of creating an elevated panoramic view. Overall, this alternative would have no visual impact -- either beneficial or adverse.

Alternative 3 (Reduced Density Alternative 1) - This alternative would have similar beneficial visual impacts to those of the proposed project. Views would vary slightly due to the reduced height of the Extended Stay Hotel (137' compared to 172' for the proposed project's hotel).

Alternative 4 (Reduced Density Alternative 1A) - This alternative would have the same beneficial visual impacts as the proposed project. The Extended Stay Hotel is the same height as the proposed project, consequently, panoramic views from a restaurant would be the same.

Alternative 5 (Reduced Density Alternative 2) - Visual impacts from this alternative would be the same as were described above for Alternative 3.

### **KOP No. 9 - Marina Parkway South and Community Parks**

#### Characteristics of Existing Views

KOP No. 9 is located at the southwestern edge of the LCP resubmittal area. Foreground views are currently to the San Diego Bay to the west and existing light industrial uses and the abandoned restaurant to the north (see Plate 19A). At greater distances to the north are seen the Coronado Bridge, downtown San Diego and Point Loma. Towards the northeast, views are to I-5 and SDG&E powerlines. The character of the landscape is open,

expansive and of high scenic interest due to the close proximity of San Diego Bay as well as the distant views to other scenic landmarks.

### Proposed Project Effects

The proposed project will create the street "Marina Parkway" and public park lands in the vicinity of KOP No. 9 (Plate 19B). Views to the bay, Coronado Bridge and downtown San Diego will be maintained from this vantage point. In addition, the project will aesthetically enhance the areas currently supporting industrial and abandoned land uses in the foreground through the creation of the public park. Project structures that will be visible from this viewpoint include the bungalows (25'), the Luxury Hotel (120'), and the Resort Hotel (265'), among others. While the proposed project will create scenic viewing opportunities from Marina Parkway, buildings located west of the Parkway (e.g., the Luxury Hotel and bungalows) will partially obscure bay views along stretches of the road. Cumulatively, the project will create a strong urban form in the central and eastern parts of the viewshed. Visibility to the interstate, SDG&E powerlines, and the City of Chula Vista will be eliminated by the proposed Midbayfront buildings. Overall, visual and aesthetic impacts will be positive due to the creation of new public areas where foreground views to the San Diego Bay will be available. In addition, beneficial aesthetic effects will result from the elimination of deteriorated structures.

### Alternative Effects

Alternative 1 (No Project) - No adverse or beneficial impacts are identified for this alternative since the viewpoint does not currently exist.

Alternative 2 (Existing LCP) - This alternative would have beneficial aesthetic effects similar to, although greater than, those described above for the proposed project. Increased beneficial effects would occur since the LCP eliminates all development west of Marina Parkway. Consequently, the LCP would result in open views to the bay along this roadway.

Alternative 3 (Reduced Density Alternative 1) - This alternative would have beneficial visual impacts similar to those of the proposed project.

Alternative 4 (Reduced Density Alternative 1A) - This alternative would have beneficial visual impacts similar to those of the existing LCP. These effects would be of greater aesthetic value than those described for the proposed project.

Alternative 5 (Reduced Density Alternative 2) - This alternative would have beneficial visual impacts similar to those of the existing LCP. These effects would be of greater aesthetic value than those described for the proposed project.

### **Development Plan Consistency with the LCPR No. 8**

The proposed LCPR No. 8 would allow buildings to be constructed within the height ranges and maximums shown on Figure 2-IV. The proposed Development Plan is generally consistent with these heights, however, the LCPR No. 8 would allow buildings of greater

height to be constructed in the following locales: 1) the LCPR No. 8 would allow the Rohr Industrial Expansion to construct buildings up to 140' in height, as compared to the proposed 120' building; 2) the LCPR No. 8 would allow buildings 44' to 60' in height to be constructed in the area proposed for tennis courts, as well as the ice rink, child care and aerobics facility; and 3) the LCPR No. 8 would allow a building up to 44' in height, south of "E" Street where the proposed project currently shows a 29-foot office plaza. As a result, the visual impacts of the LCPR No. 8 could be greater than those documented for the proposed project in these locales.

Cumulative impacts could occur from the combined loss of views along with the cited inadequacy of public parking, further limiting the public's ability to access views. Also, approval of this project could be precedent setting, suggesting that the City and the Coastal Commission would be receptive to other redevelopments or new developments of a dense high-rise nature. These impacts are discussed further in Section 9.0.

### **Mitigation**

#### **Environmental Quality and Resource Protection**

Mitigation measures to reduce impacts to the Chula Vista Nature Interpretive Center would entail a redesign of the proposed project and Alternatives 3, 4 and 5. In general, building heights would need to be reduced to existing LCP limitations. Apartments should be of a low profile and high-rise hotel(s) should not exceed 12 stories. The urban form of the project should not dominate the view from, nor visitor experience at, the Interpretive Center. Development should be scaled down in size and height east of the marsh. The marsh should be perceived as part of an open space system, and used to soften the visual impact of development in the vicinity. These measures are not proposed, thus the impact remains significant.

#### **Obstruction of Views to San Diego Bay**

Mitigation measures to reduce the impacts to views along Bay Boulevard and commercial/visitor establishments would include redesigning building locations in such a way as to permit intermittent views to the bay. The redesign of building locations would also most likely require the redesign of the project (and Alternatives 3, 4 and 5) and associated reduced densities. These measures are not proposed, thus the impact remains significant.

#### **Aesthetic Impacts on Waterfront Image and Community Identity**

Mitigation measures to reduce the impacts on the City of Chula Vista waterfront image and community identity entail the redesign of the project to reduce building heights and densities in accordance with the existing LCP and community urban forms. Specific mitigation recommendations to accomplish these goals are listed below. In addition, since the proposed project does not specifically include final building site plans, architectural or landscape plans, the mitigation recommendations also address these issues. It should be noted that although some of these design measures below have been incorporated into the

proposed LCPR No. 8 and the Development Plan, some of the measures have not; thus, the significant impact remains.

1. Vary the building heights and roof heights in order to replicate the variety which already exists in the City of Chula Vista.
2. Integrate structures into the site's landforms. Consider clustering development on the central portion of the site, and limiting development on the west and north section.
3. Graduate building heights of development in the south-central area of the site in order to create a view angle which focuses on the shoreline.
4. Allow views to the Chula Vista bayfront in order to ensure visual compatibility with Chula Vista's waterfront and provide architectural interest on the site. Preserve view corridors along "E" Street and "F" Street through building siting and setbacks. In general, building setbacks from local public roads should be equal to, or greater than, the building height. Restrict building heights in the northern section to be lower than the height of freeway landscaping and overpasses to keep views of the Chula Vista bayfront open.
5. Establish landmarks on the site which would be visible from "E" Street. Establish a design pattern or sequence north of the freeway and continue this design element on the site. Use compatible streetscapes along "E" Street on both sides of the freeway to create a visual connection between the project site and portions of Chula Vista east of the freeway. The streetscape could consist of a combination of street trees, street lights, or paving.
6. Retain portions of the Midbayfront as open space that maintain panoramic views to the bay as well as distinct views to the Coronado Bridge, downtown San Diego and the Coronado Islands.
7. Install plants which eventually would frame but not block views. Use plants with seasonal or structural interest to emphasize view corridors. Emphasize on-site view corridors by flanking views with plants and buildings.
8. Use vertical architectural features, such as a single tall tower to give the site identity without obstructing views or creating dense urban walls.
9. Implement lighting plans which accentuate entrances to the site and landmarks. Keep overhead lighting to a minimum and hood lights in order to prevent light spill. Low lighting should prevail along the shoreline.
10. Design and locate buildings adjacent to the freeway in a manner so as to allow views into the site.

11. Use colors and materials which would blend into the site. Appropriate colors could include lighter tones and pastels. Do not allow reflective glass or reflective roof materials.
12. Cluster buildings located in the central portion of the site to create view corridors which would be wide enough to be effective when seen from one-half mile east along "E" Street.
13. Locate buildings on Marina Parkway to create a visual sequence for visitors traveling to the Chula Vista bayfront and Interpretive Center. View corridors should allow distant views to landmarks and internal views to other on-site locations. Developments west of Marina Parkway should be eliminated to allow open uninterrupted scenic views to the bay.
14. Provide visual orientation soon after entering the site in order to direct visitors to each major site area. Such orientation could be provided by street design and amenities, such as recognizable patterns, and by building siting.

#### Analysis of Significance

Significant visual and aesthetic impacts would occur from development of the proposed project and the three reduced density alternatives (Alternatives 3, 4 and 5). Significant impacts would also result from Alternative 8. No significant aesthetic/visual impacts would occur from development allowed under the existing LCP (Alternatives 2, 7 and 9).

Significant impacts are due to:

1. Creation of a visually dominant urban landscape from the Nature Interpretive Center, where aesthetic enjoyment of the natural environment is a significant part of the visitor experience and would be permanently lost.
2. Obstruction of existing scenic bay views from public use areas and establishments along Bay Boulevard.
3. Creation of a visually dominant urban landscape from areas within the City of Chula Vista and from I-5, that would be incompatible with the waterfront image community identity of Chula Vista.

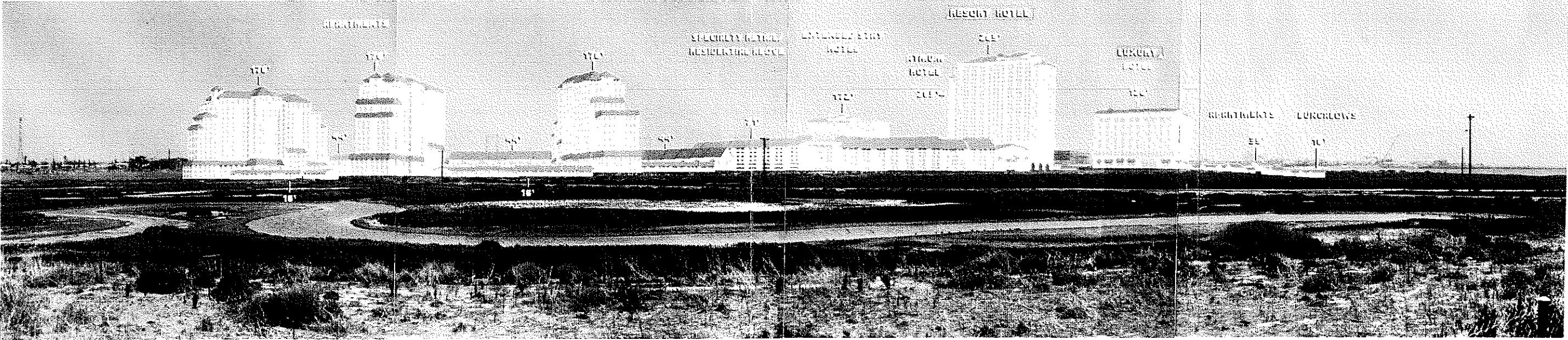
Mitigation of these impacts would require a redesign of the project in conjunction with further reduced density alternatives. Otherwise, these impacts would remain significant. Significant impacts to urban form and image are to some degree dependent upon detailed design measures, landscaping, signage and visual links that would be created between the bayfront and the existing community east of I-5. The degree to which these impacts can be reduced or mitigated would be determined at the project-level of CEQA compliance. Mitigation for No. 1 would require removal or significantly reduced building heights for apartment buildings in closest proximity to the Interpretive Center, as well as reduced density and building heights for high-rise hotels. Mitigation for No. 2 would require changes

in building locations and densities to permit some views to the bay along Bay Boulevard and from commercial/visitor establishments. Mitigation for No. 3 would require overall reduced building heights and reductions in density, in accordance with the existing certified LCP, as well as implementation of specific design criteria.



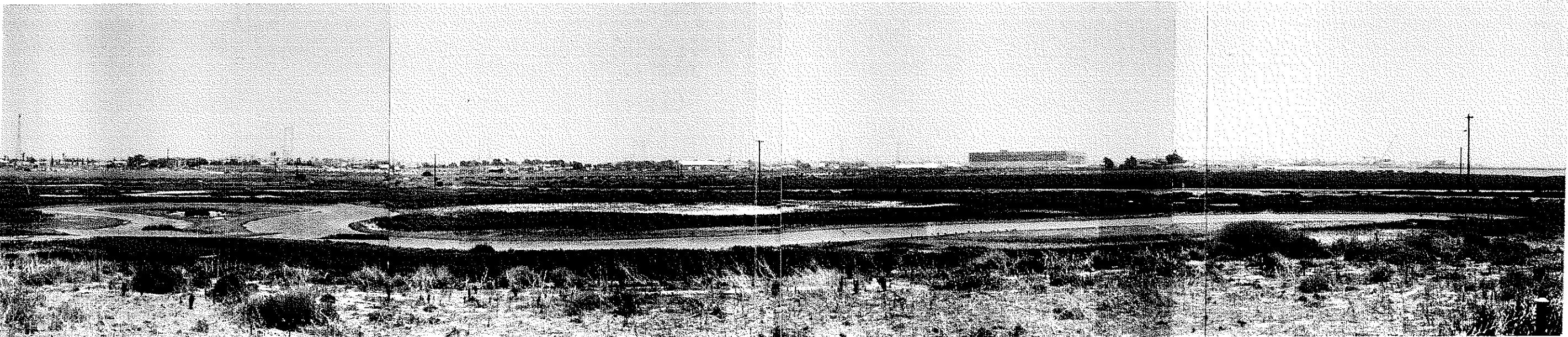
**CURRUMBO SUBMITAL #8**

**PLATE 1A**

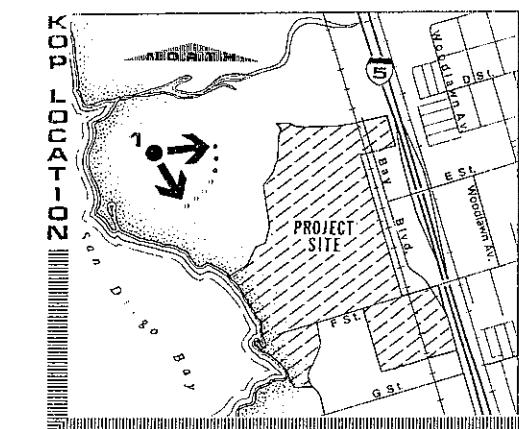


**PROPOSED PROJECT**

**PLATE 1B**

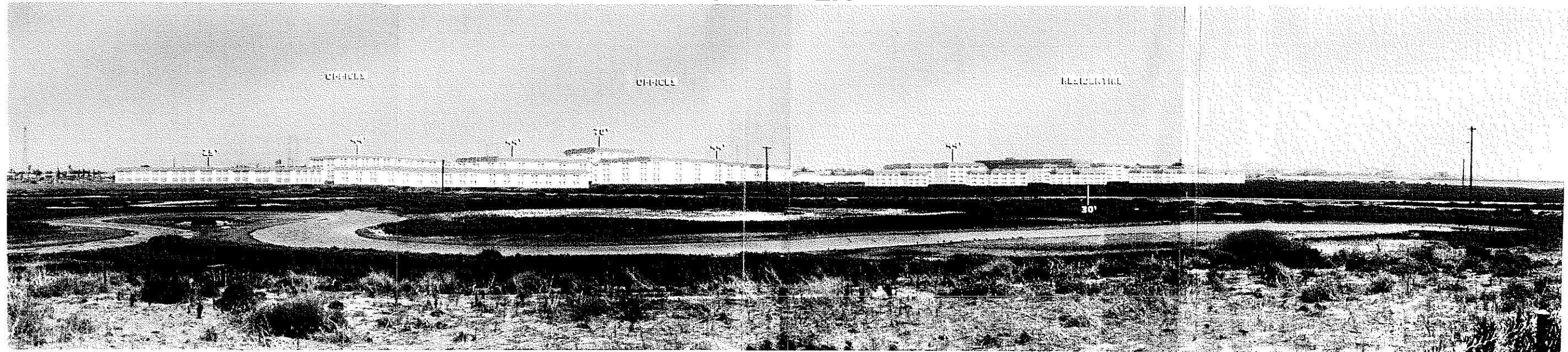


**ALTERNATIVE 1 - NO PROJECT**



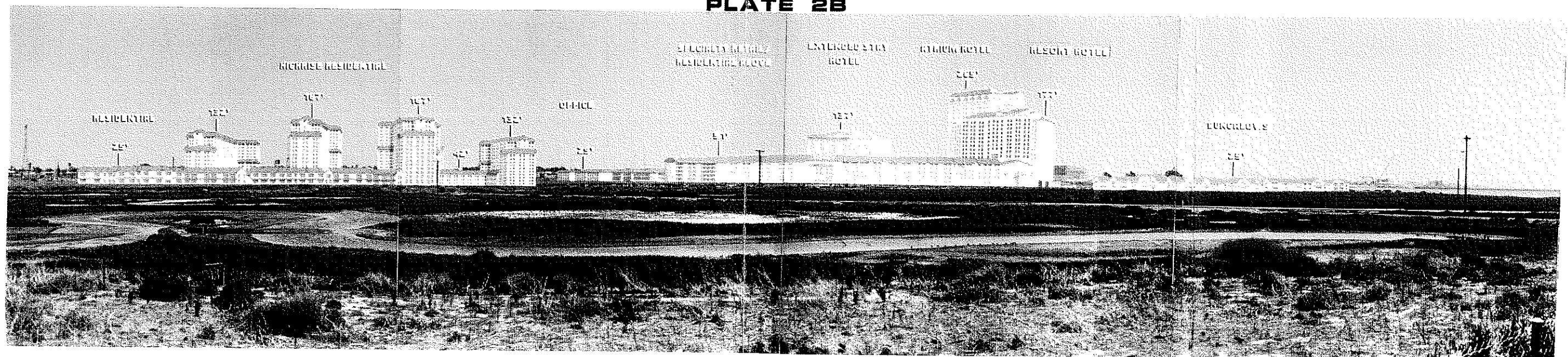
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RESUBMITTAL #8**

**PLATE 2A**

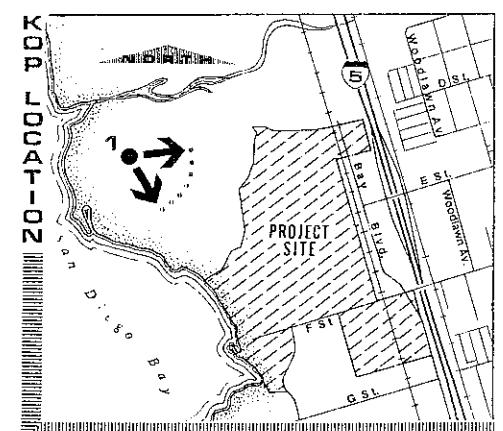


**ALTERNATIVE 2 - EXISTING CERTIFIED LCP**

**PLATE 2B**

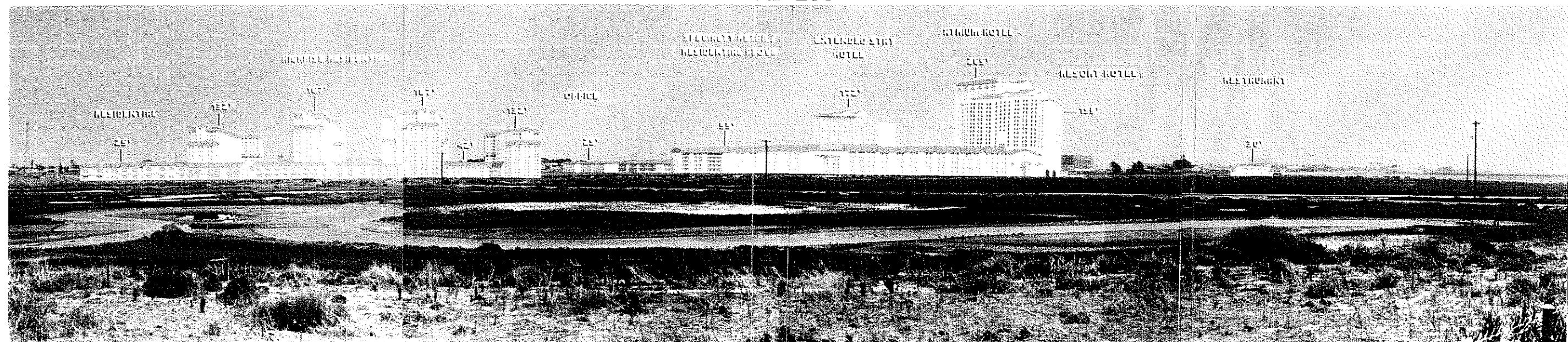


**ALTERNATIVE 3 - REDUCED DENSITY 1**



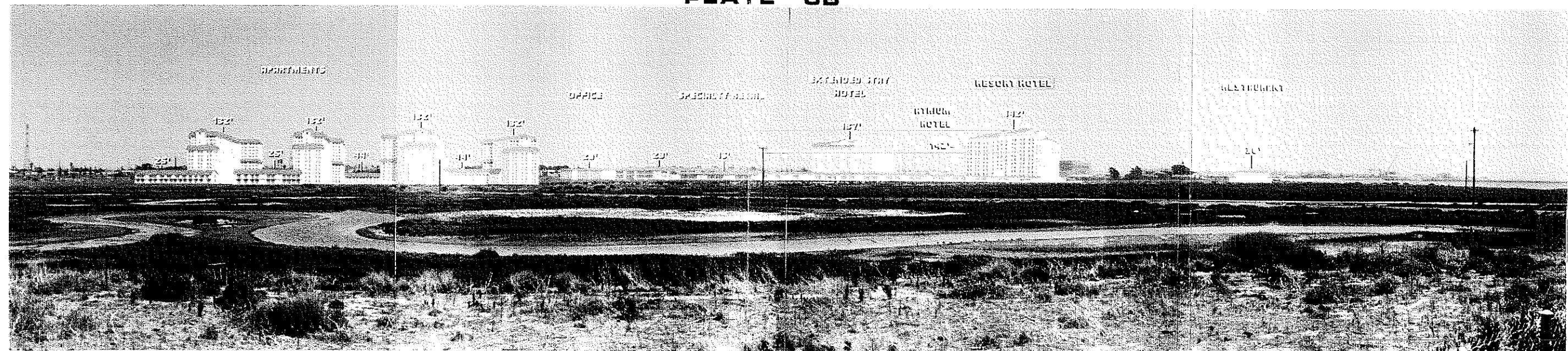
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**PLATE 3A**

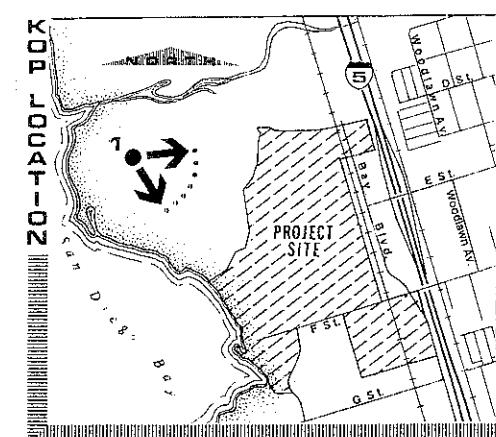


**ALTERNATIVE 4 - REDUCED DENSITY 1A**

**PLATE 3B**

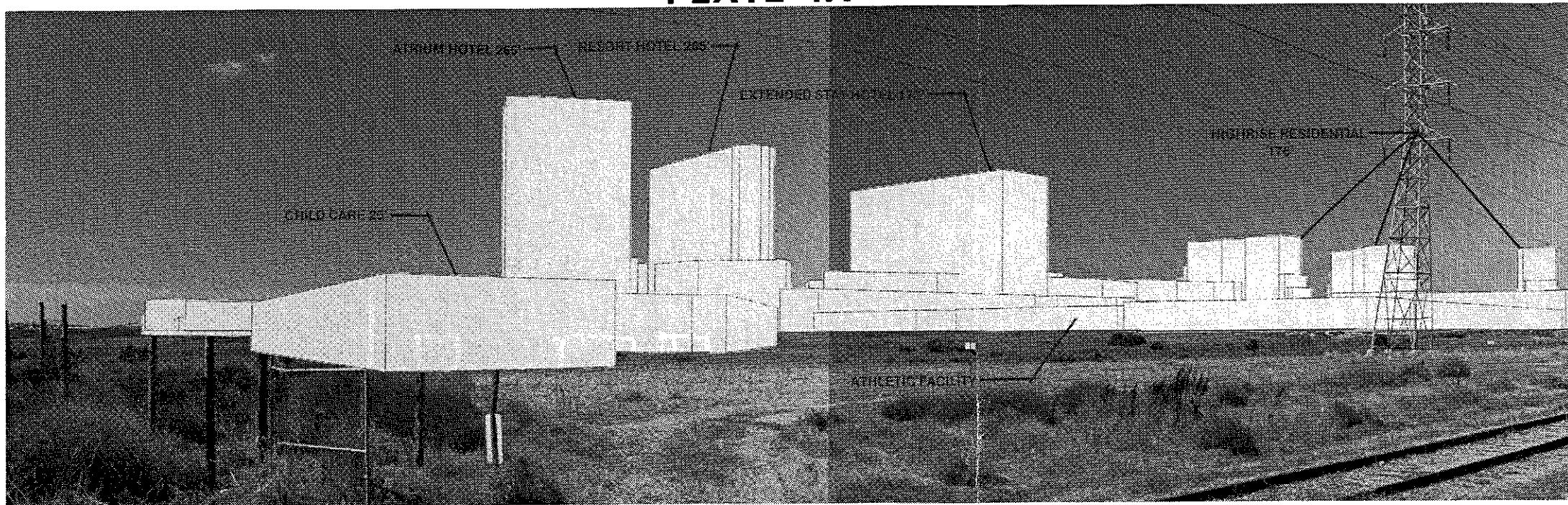


**ALTERNATIVE 5 - REDUCED DENSITY 2**



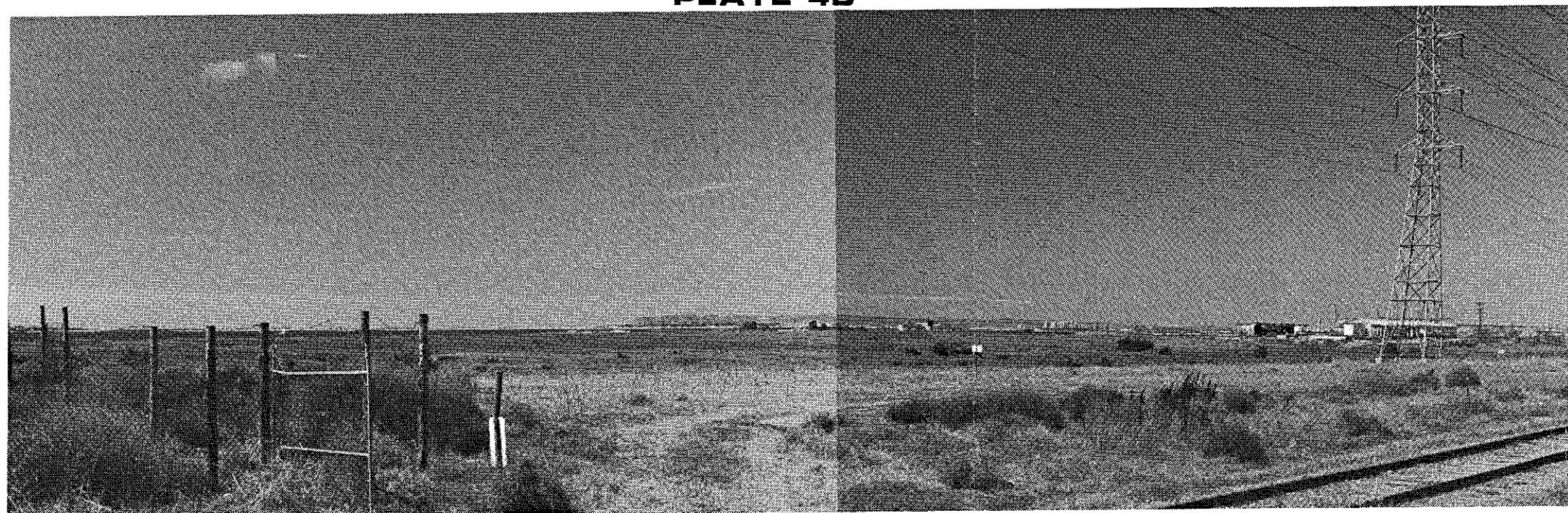
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**PLATE 4A**

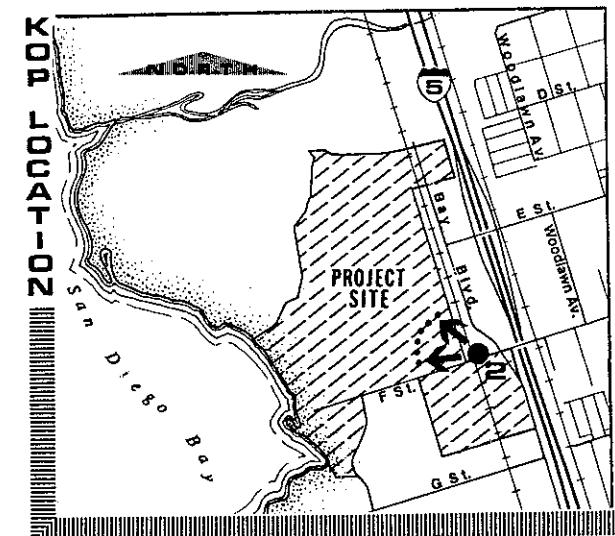


**PROPOSED PROJECT**

**PLATE 4B**



**ALTERNATIVE 1 - NO PROJECT**



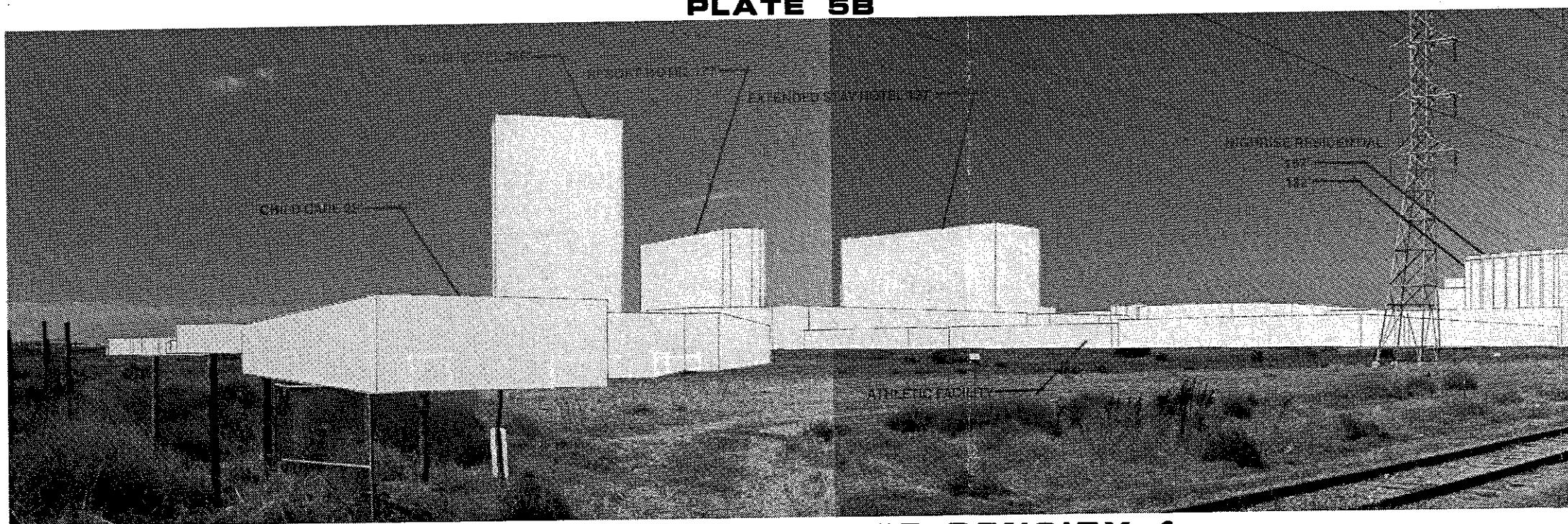
**KOP SUBMITAL #8**

**PLATE 5A**

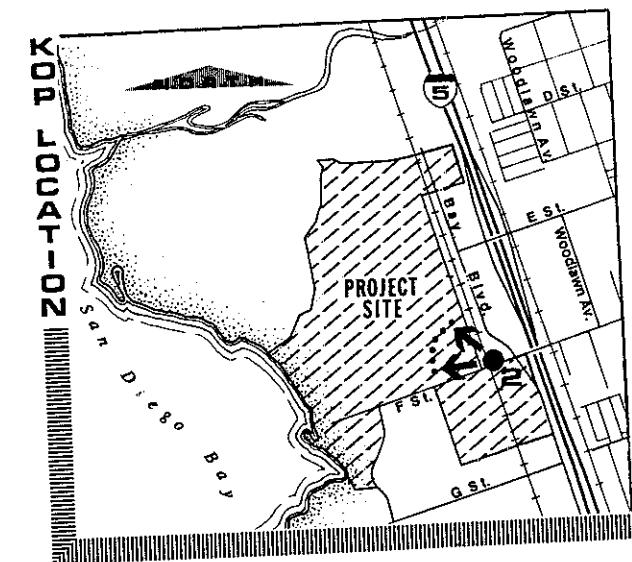


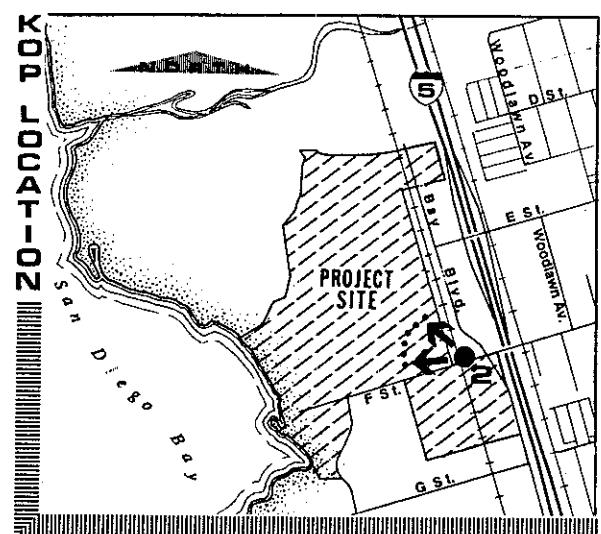
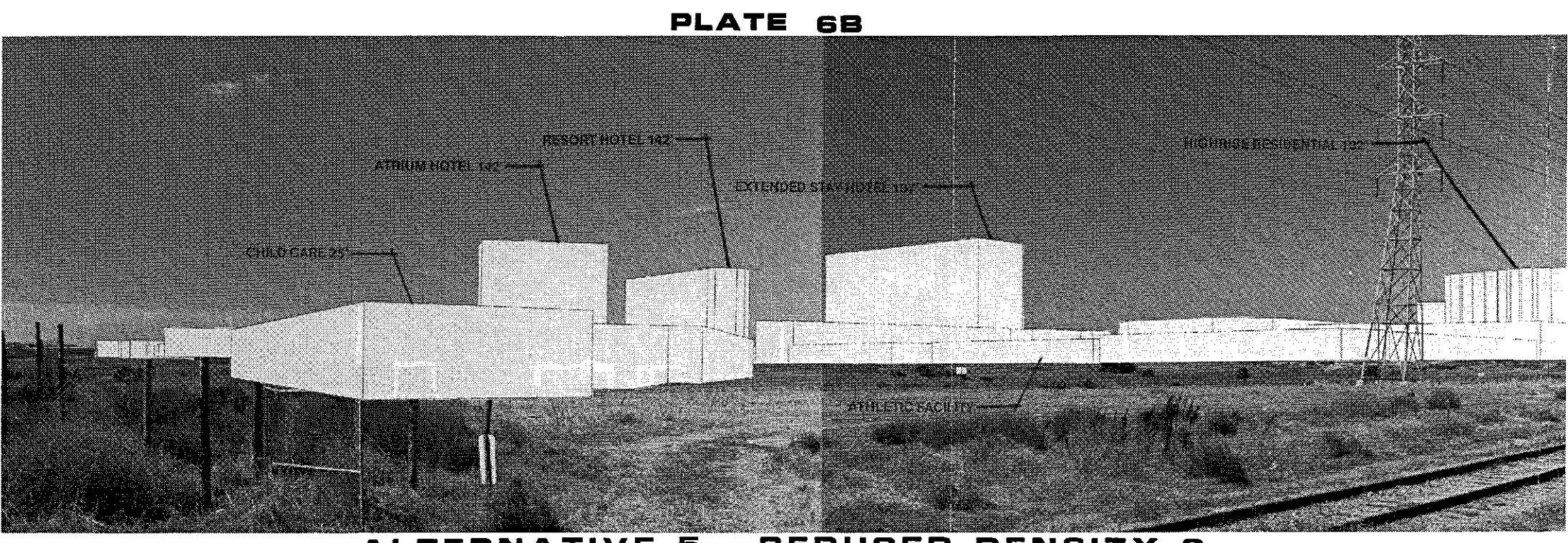
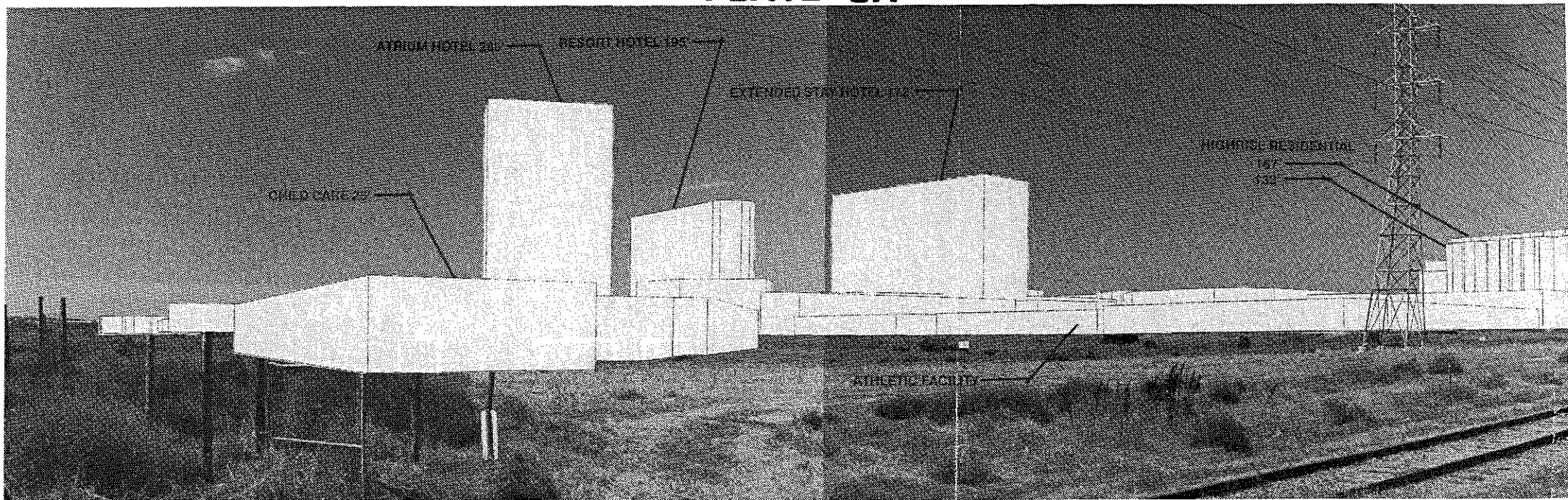
**ALTERNATIVE 2 - EXISTING CERTIFIED LCP**

**PLATE 5B**



**ALTERNATIVE 3 - REDUCED DENSITY 1**

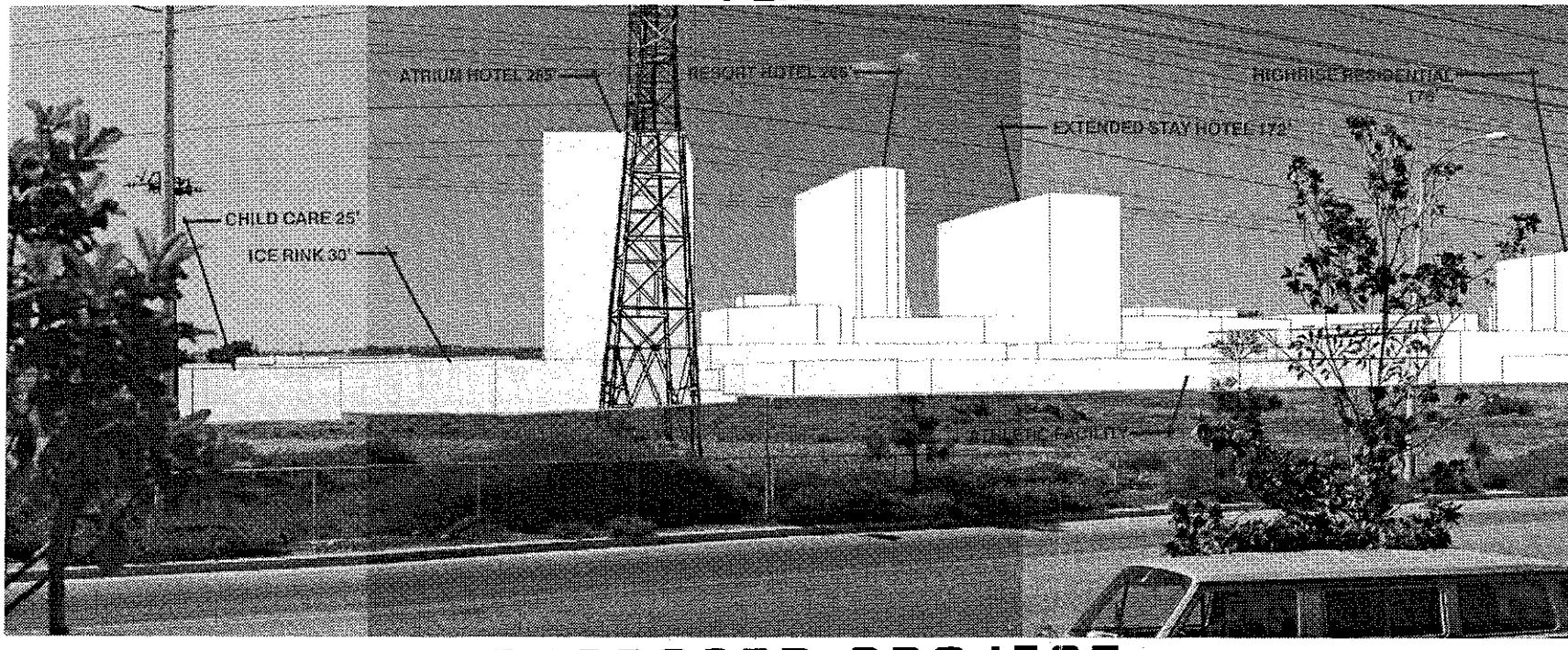




**CORRESPONDENCE**

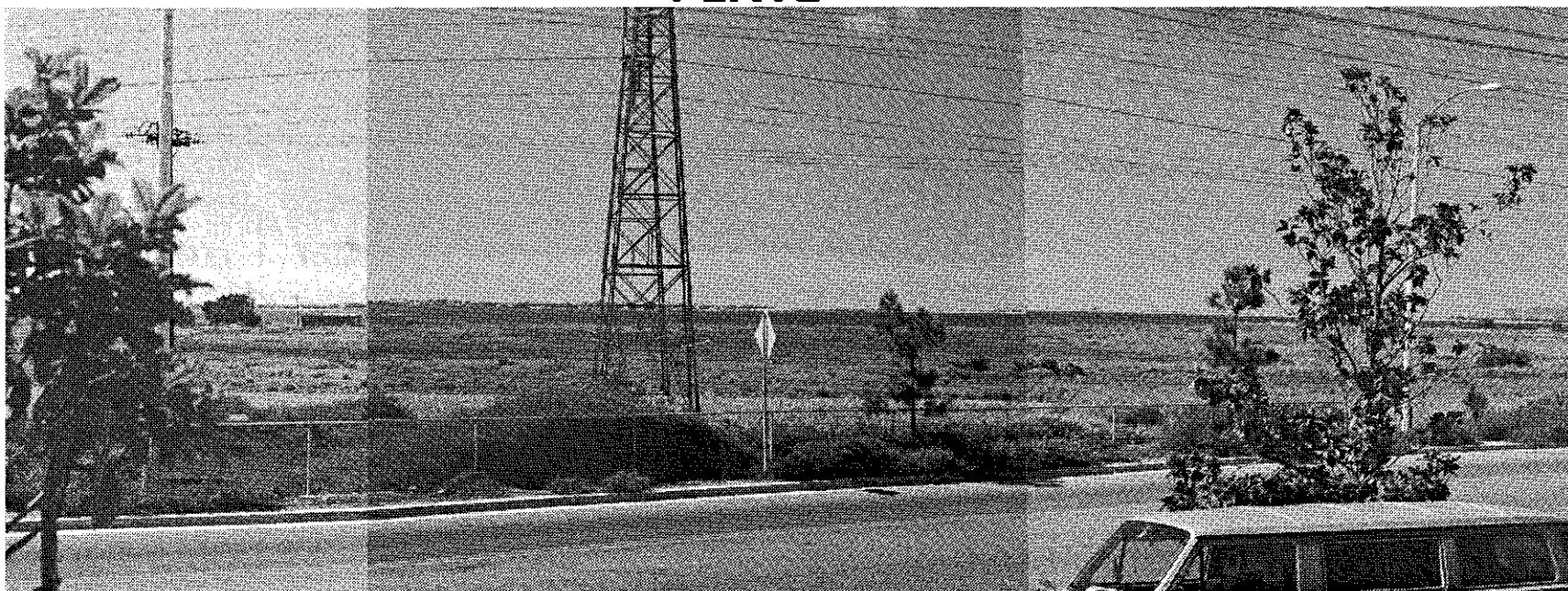
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**PLATE 7A**

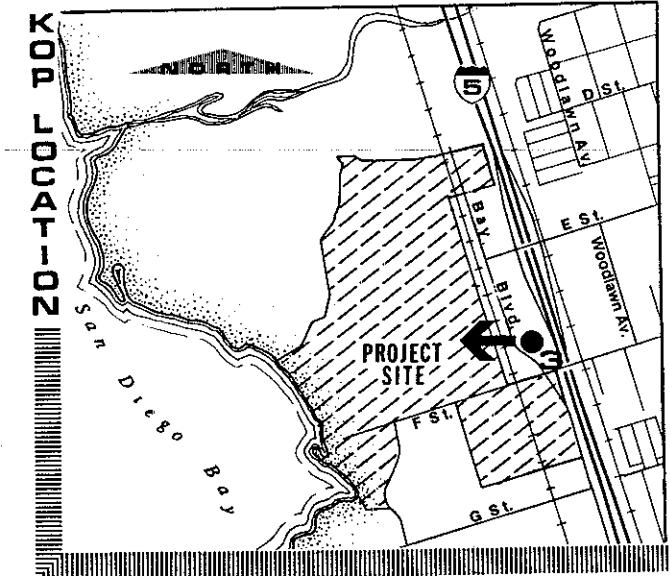


**PROPOSED PROJECT**

**PLATE 7B**

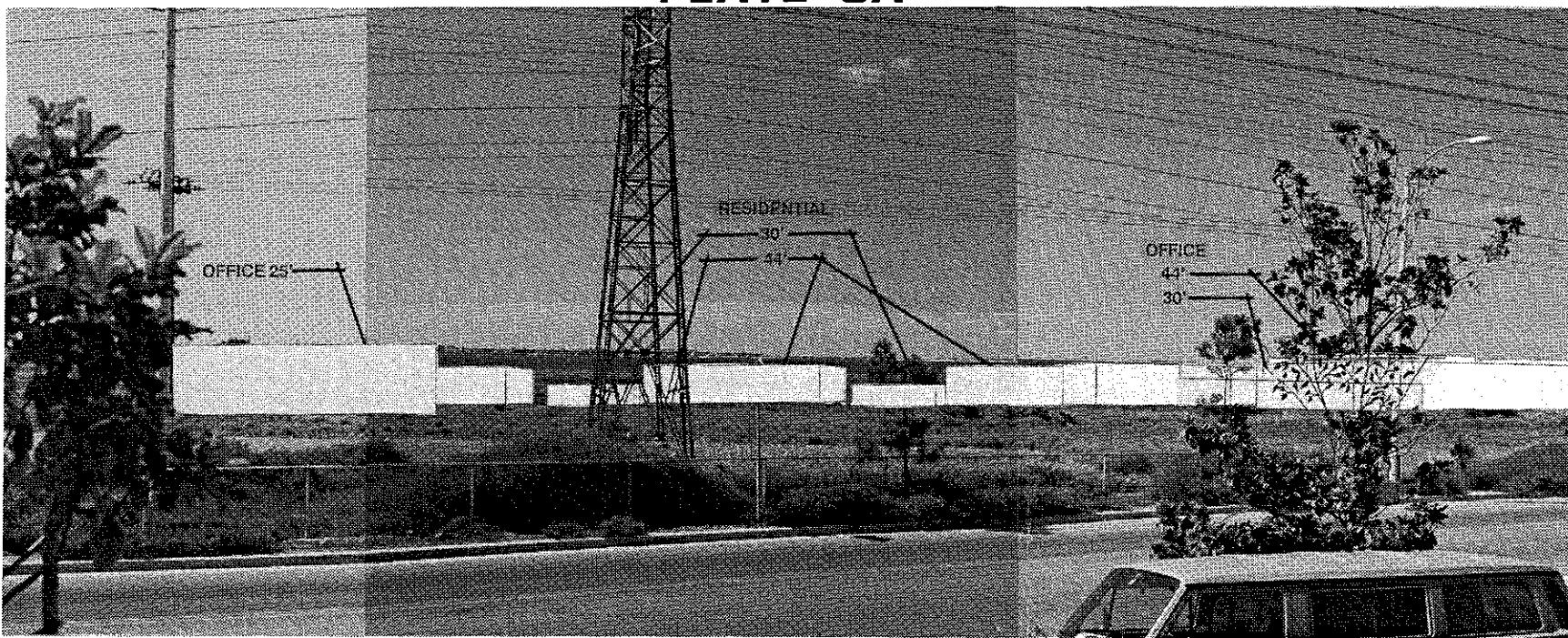


**ALTERNATIVE 1 - NO PROJECT**



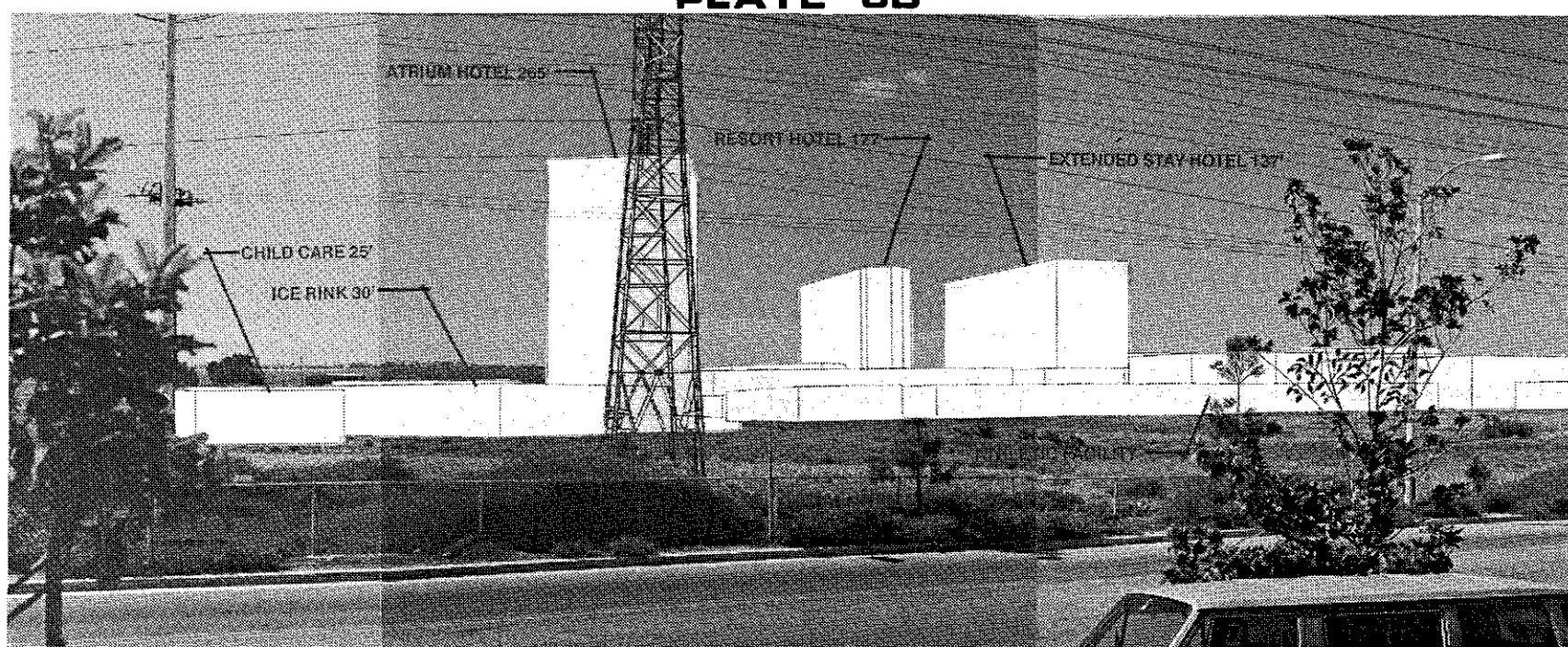
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**PLATE 8A**

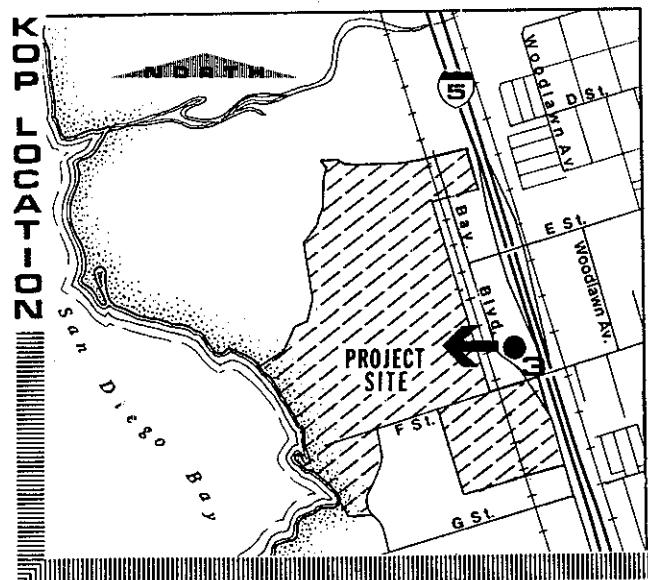


**ALTERNATIVE 2 - EXISTING CERTIFIED LCP**

**PLATE 8B**

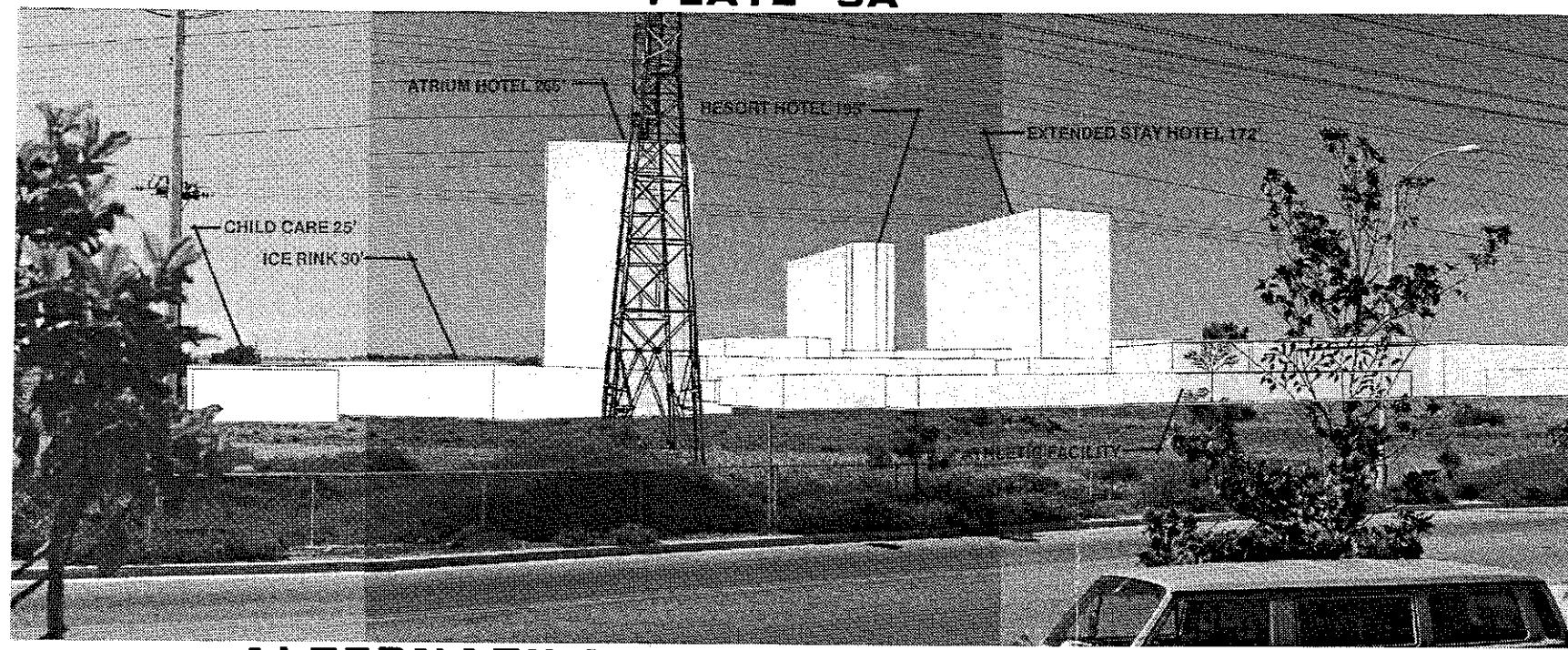


**ALTERNATIVE 3 - REDUCED DENSITY 1**



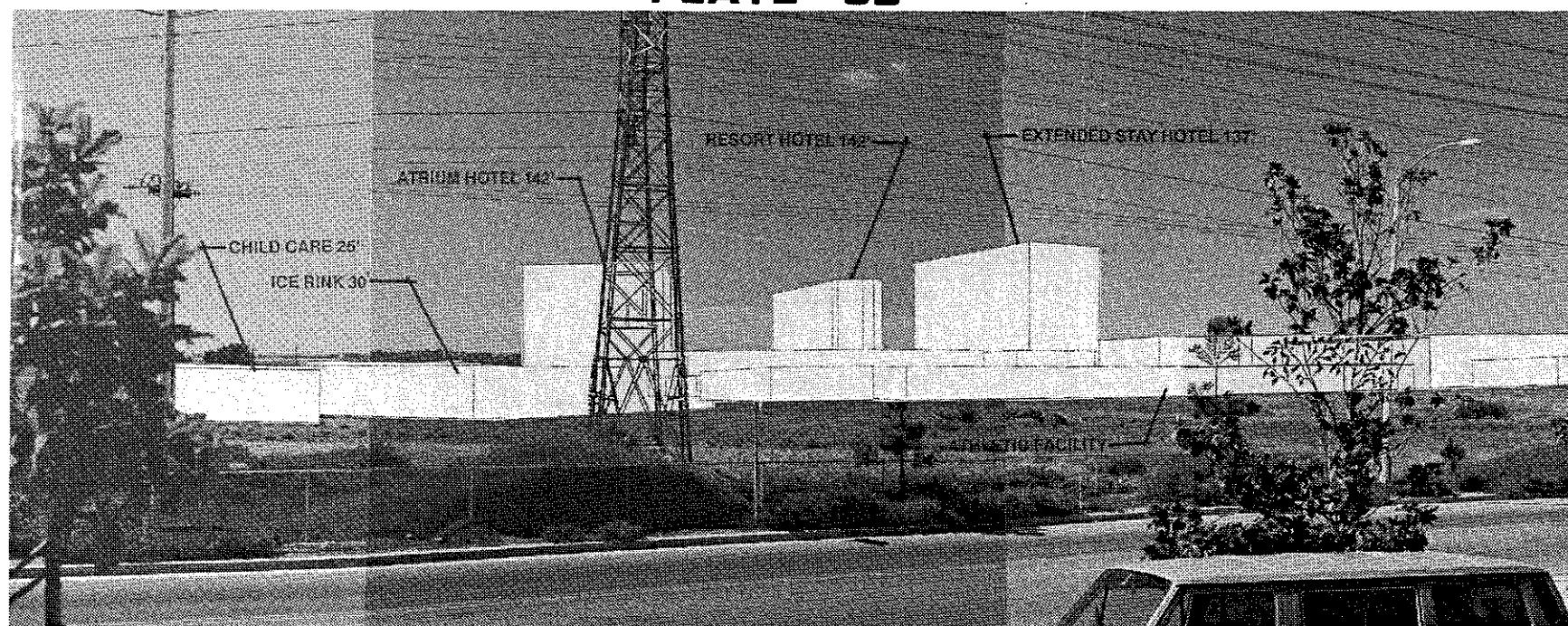
**KOP RESUBMITTAL #8**

**PLATE 9A**

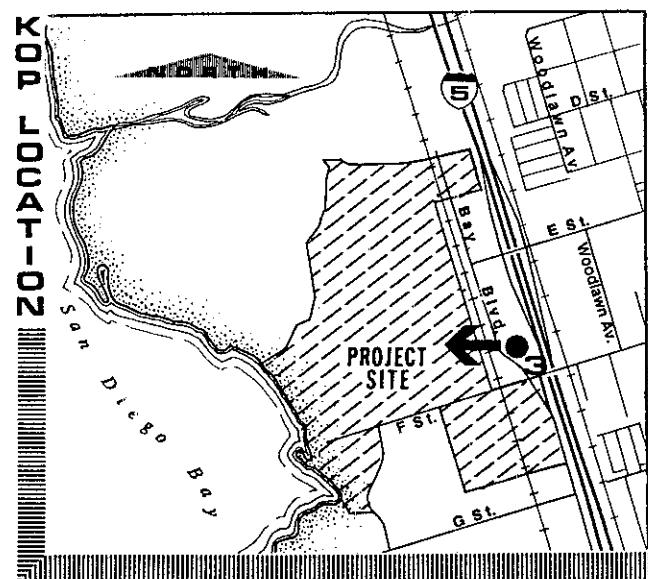


**ALTERNATIVE 4 - REDUCED DENSITY 1A**

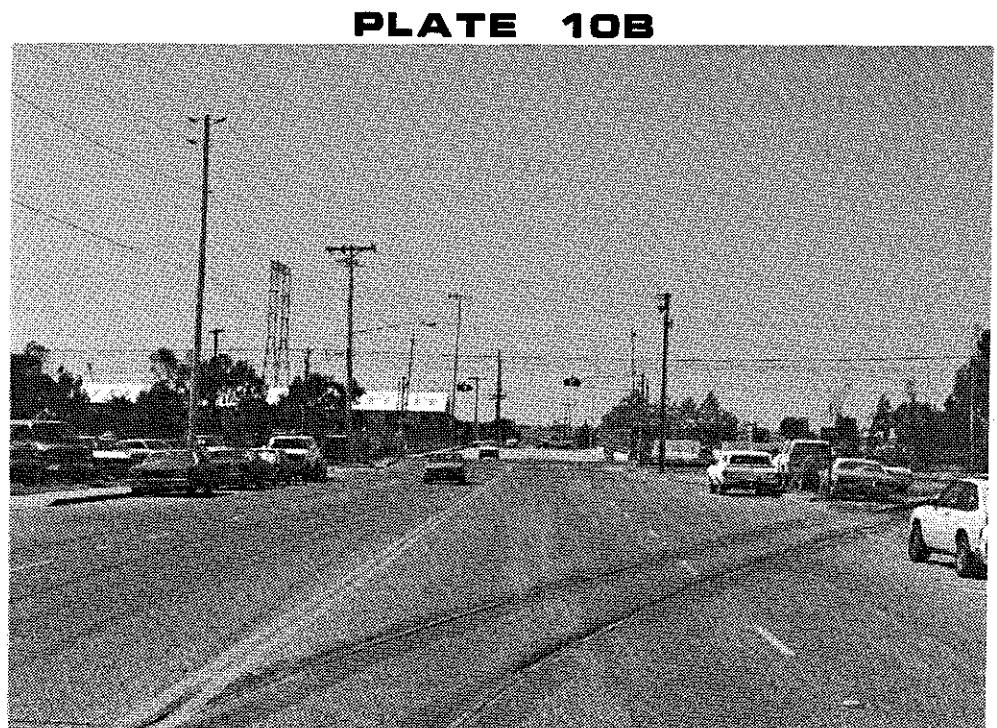
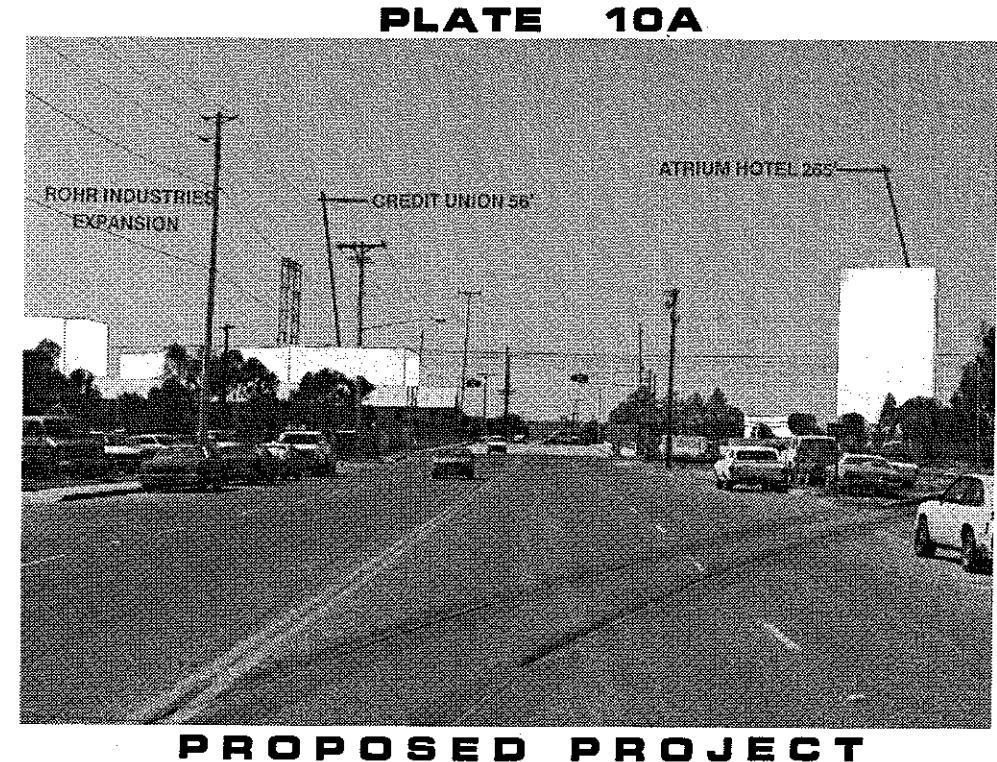
**PLATE 9B**



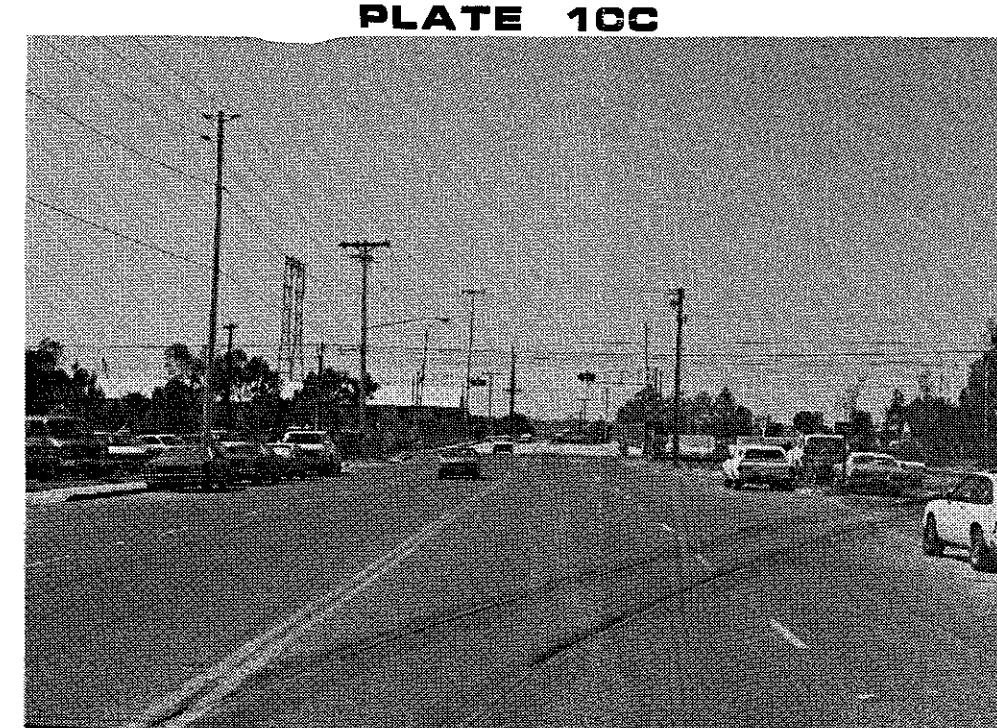
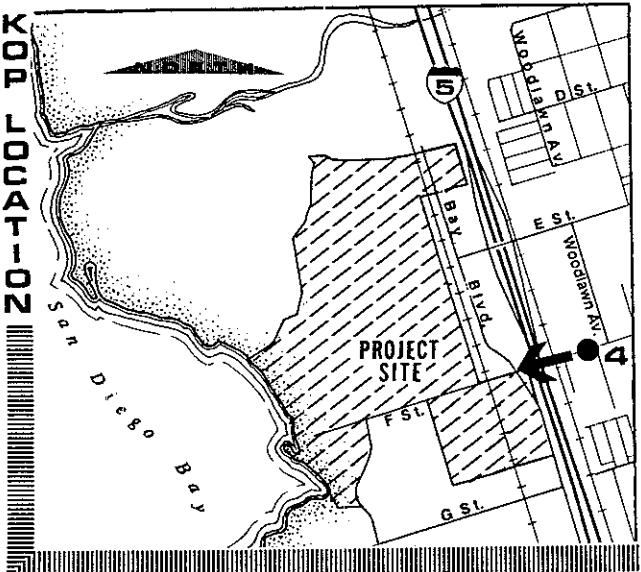
**ALTERNATIVE 5 - REDUCED DENSITY 2**



**LCP RESUBMITTAL #8**

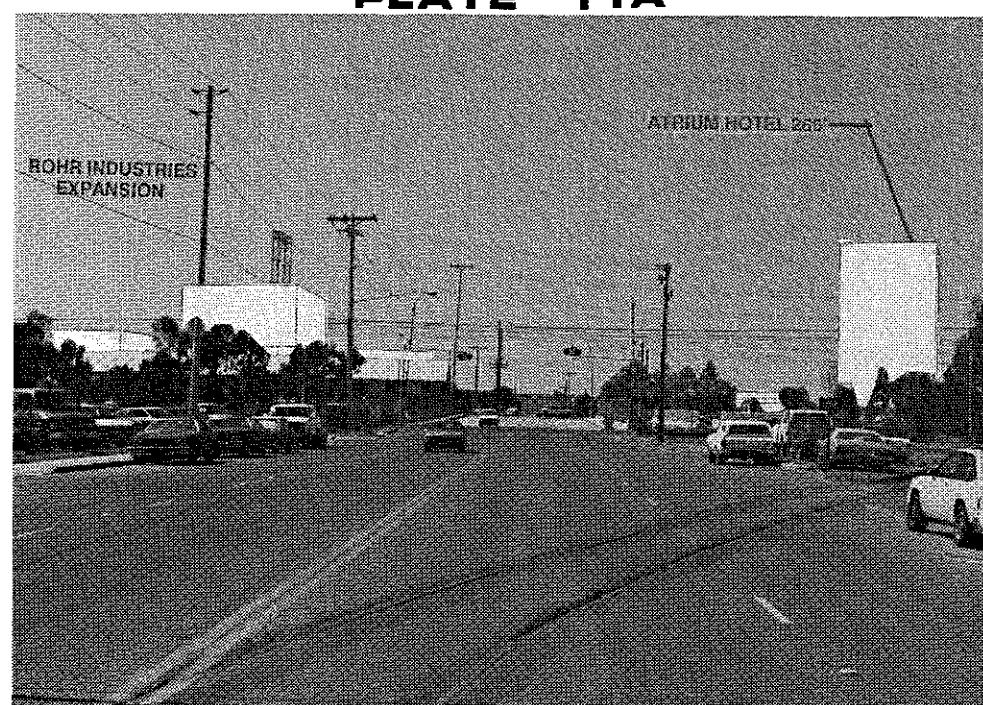


**ALTERNATIVE 1 - NO PROJECT**

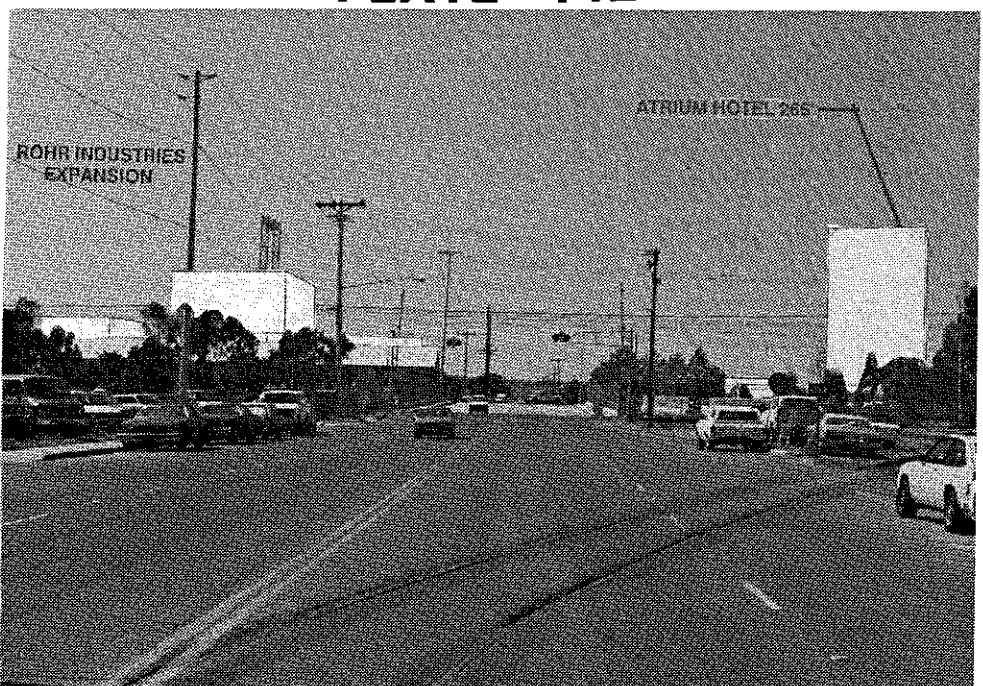


**ALTERNATIVE 2 - EXISTING CERTIFIED LCP**

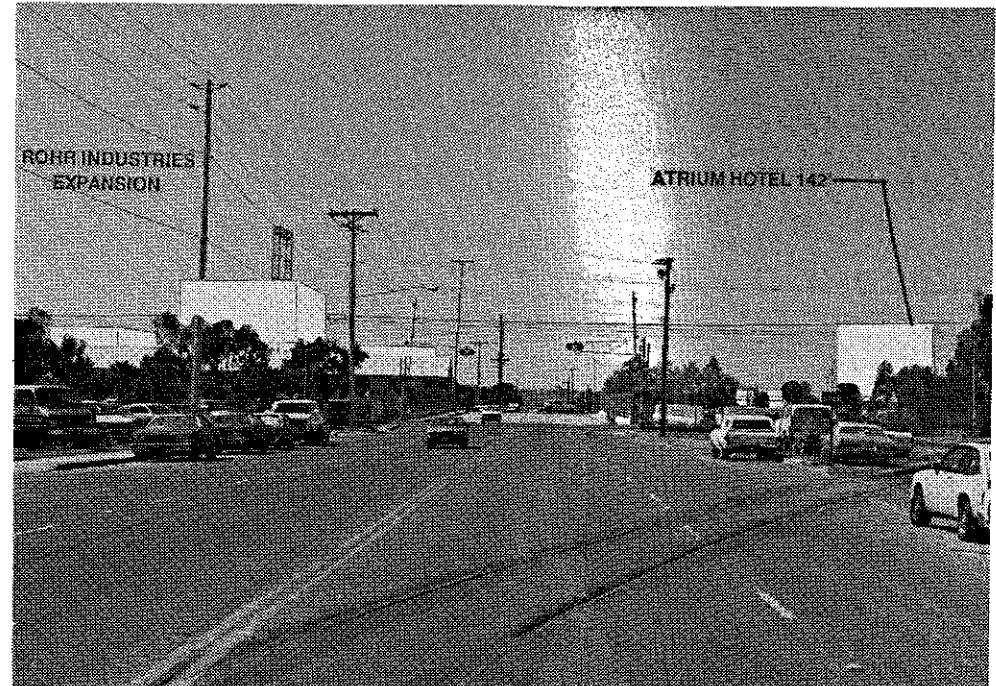
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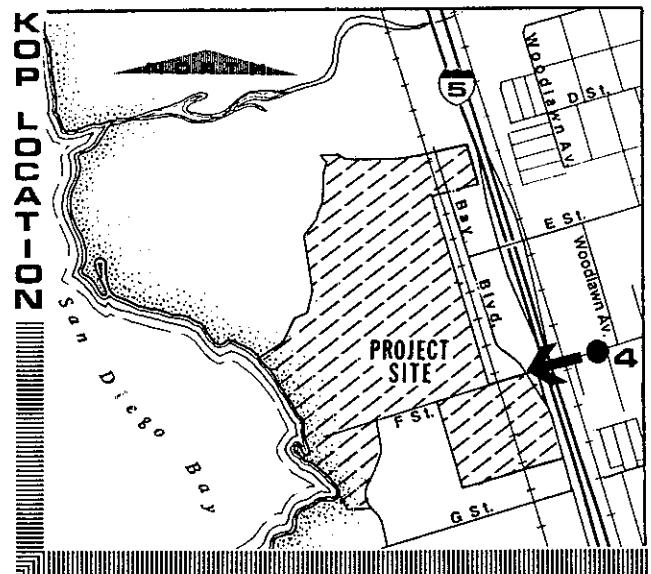
**ALTERNATIVE 3 - REDUCED DENSITY 1**



**ALTERNATIVE 4 - REDUCED DENSITY 1A**

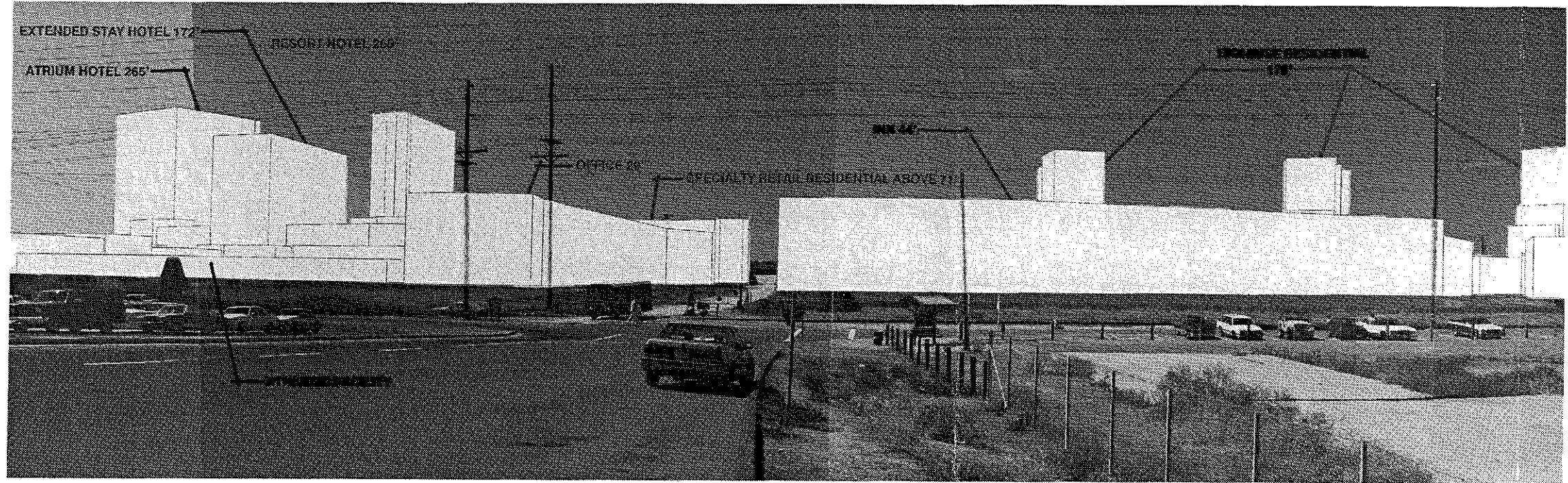


**ALTERNATIVE 5 - REDUCED DENSITY 2**



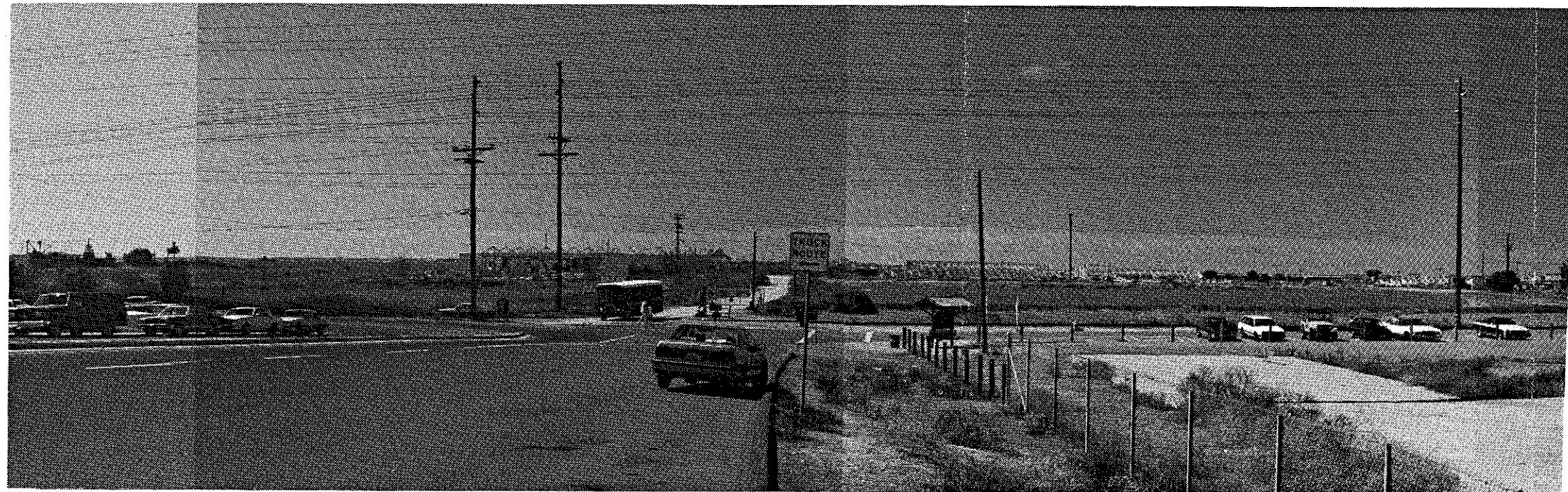
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**PLATE 12A**

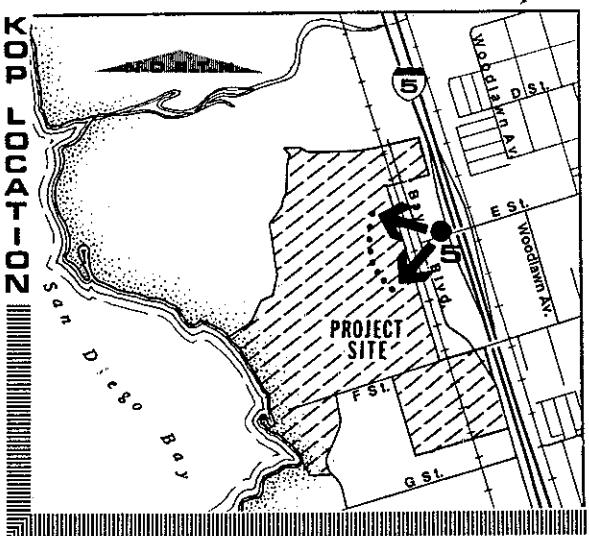


**PROPOSED PROJECT**

**PLATE 12B**

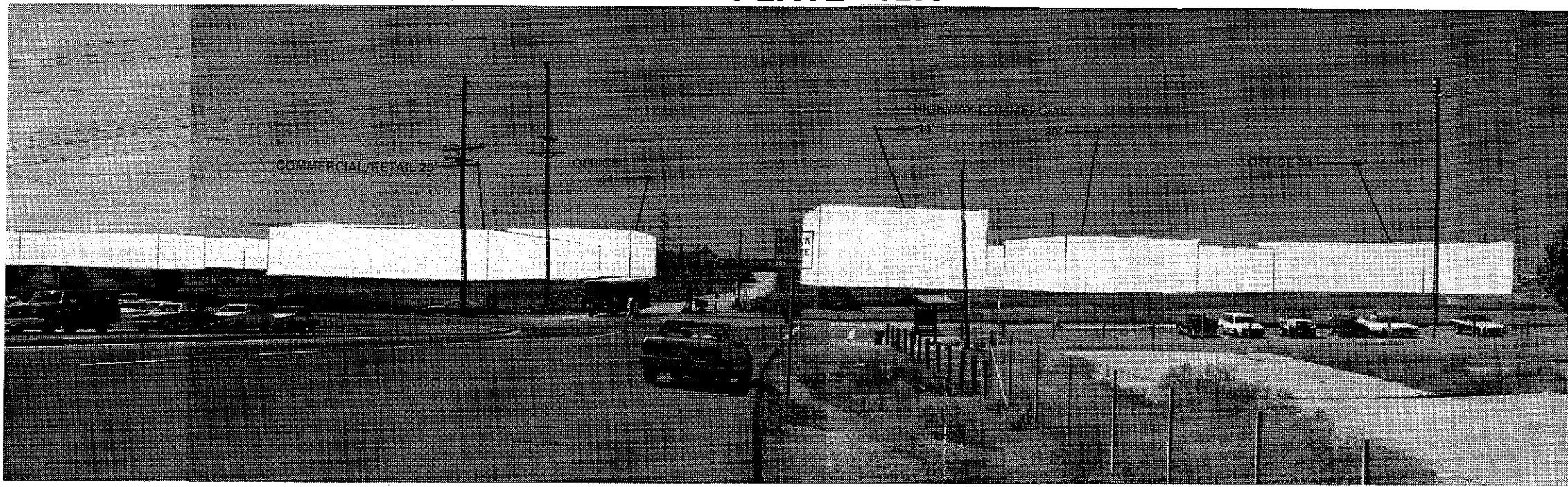


**ALTERNATIVE 1 - NO PROJECT**



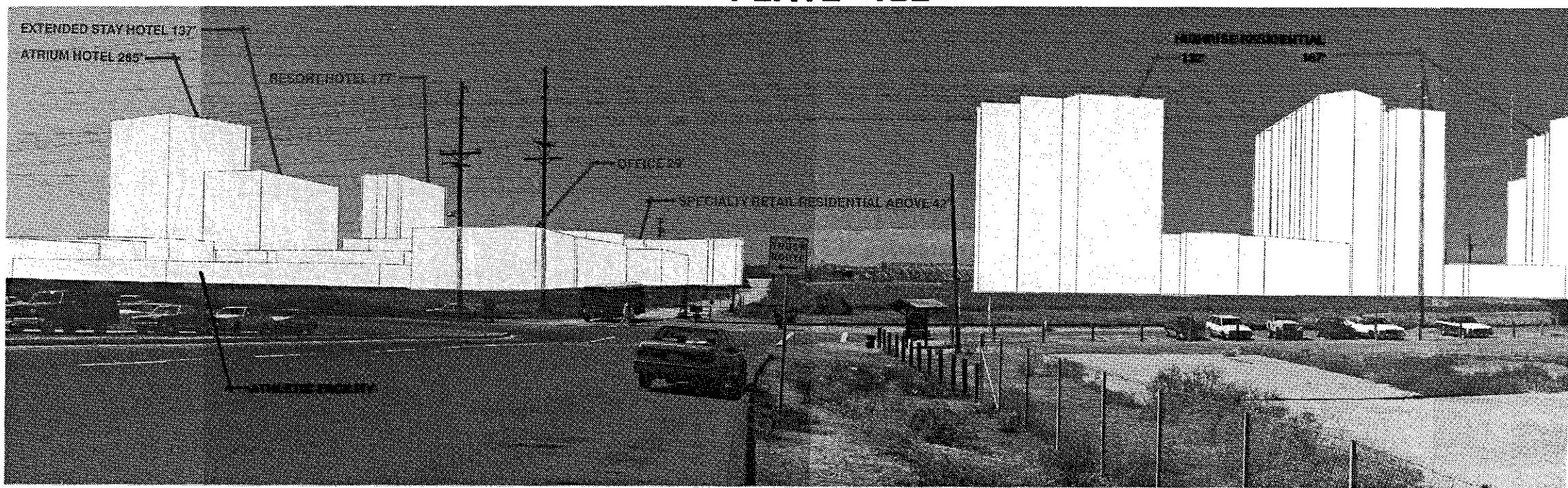
LCP RESUBMITTAL #8

PLATE 13A



ALTERNATIVE 2 - EXISTING CERTIFIED LCP

PLATE 13B



ALTERNATIVE 3 - REDUCED DENSITY 1

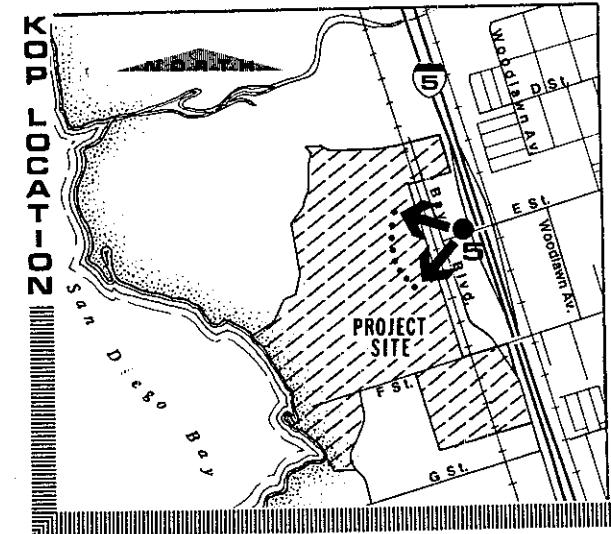
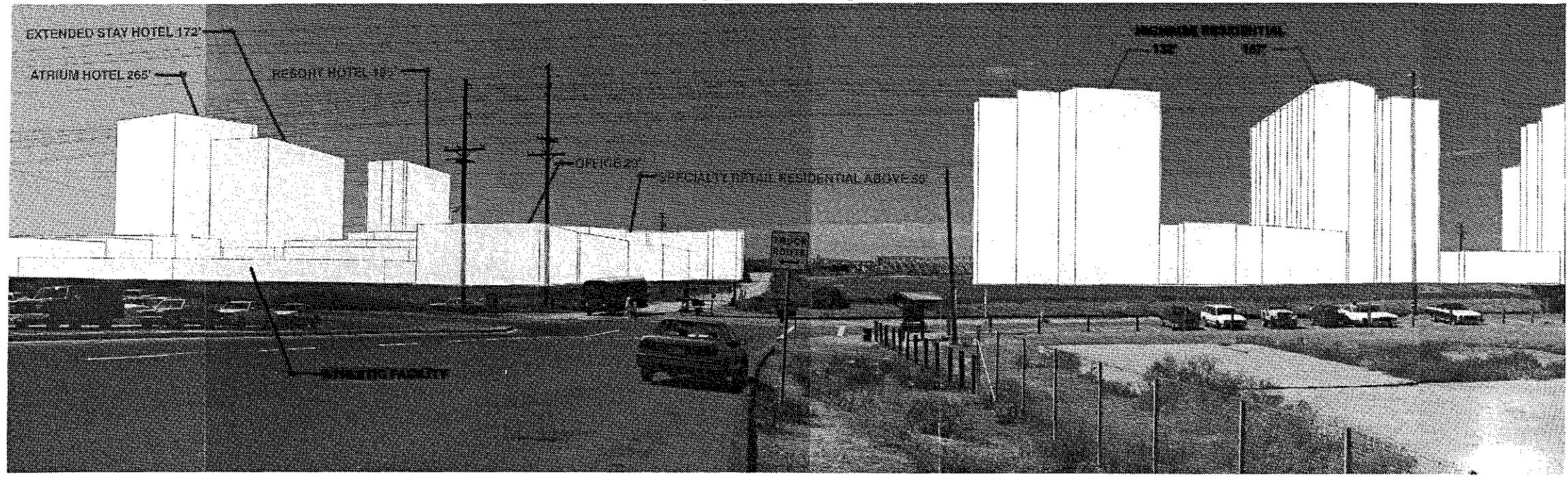
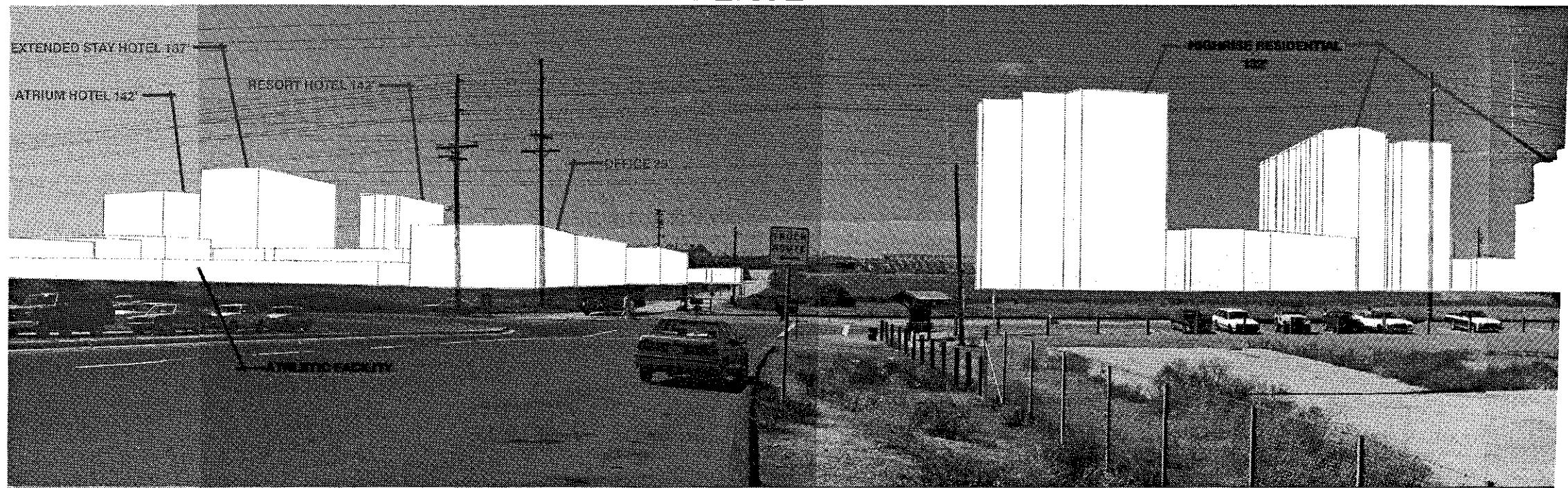


PLATE 14A

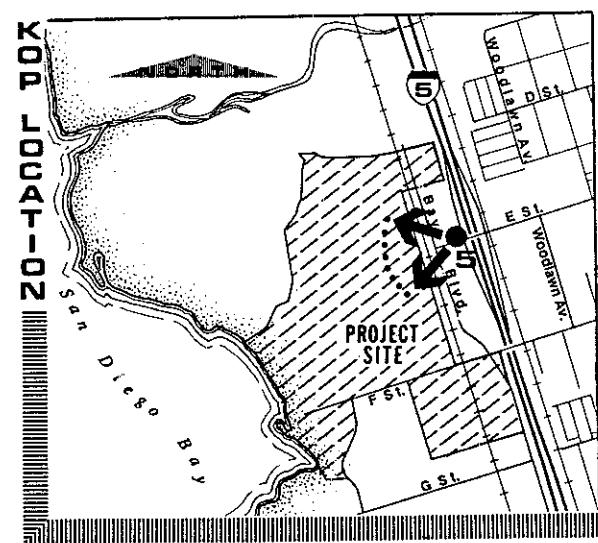


ALTERNATIVE 4 - REDUCED DENSITY 1A

PLATE 14B

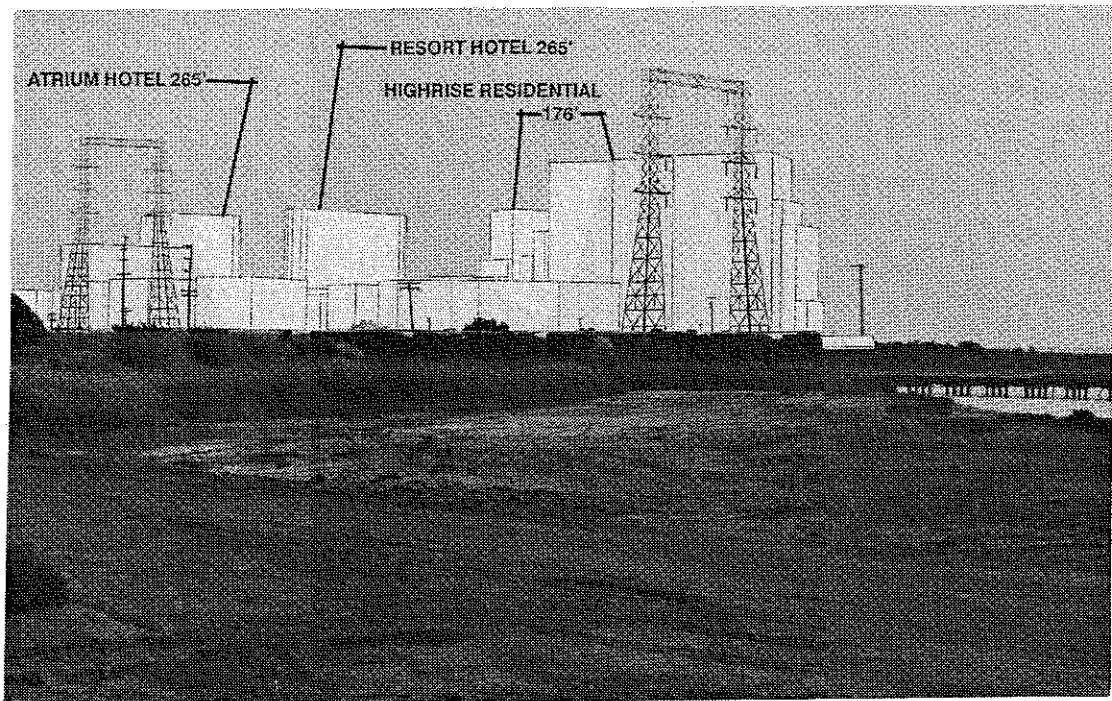


ALTERNATIVE 5 - REDUCED DENSITY 2

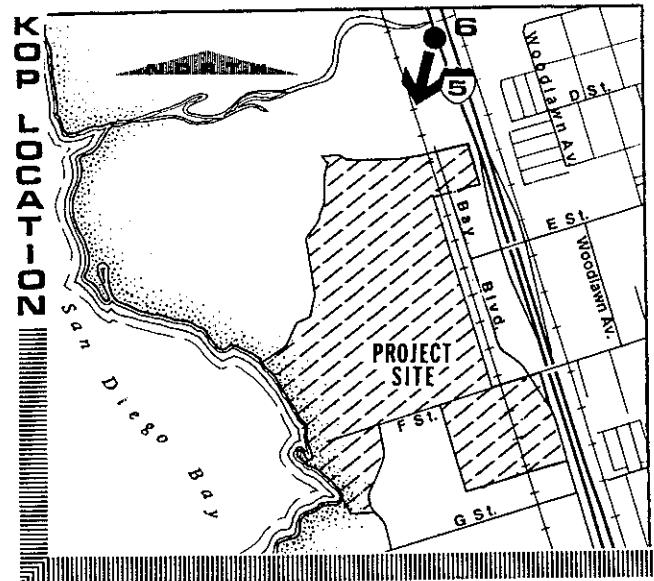


**LCP RESUBMITTAL #8**

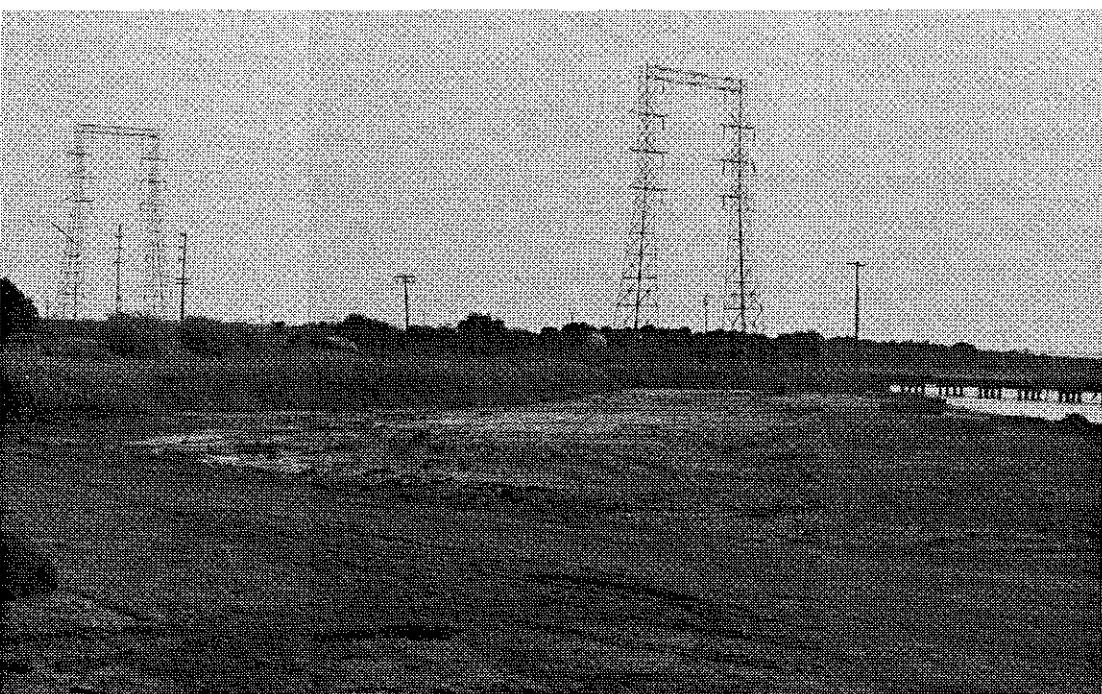
**PLATE 15A**



**PROPOSED PROJECT**



**PLATE 15B**



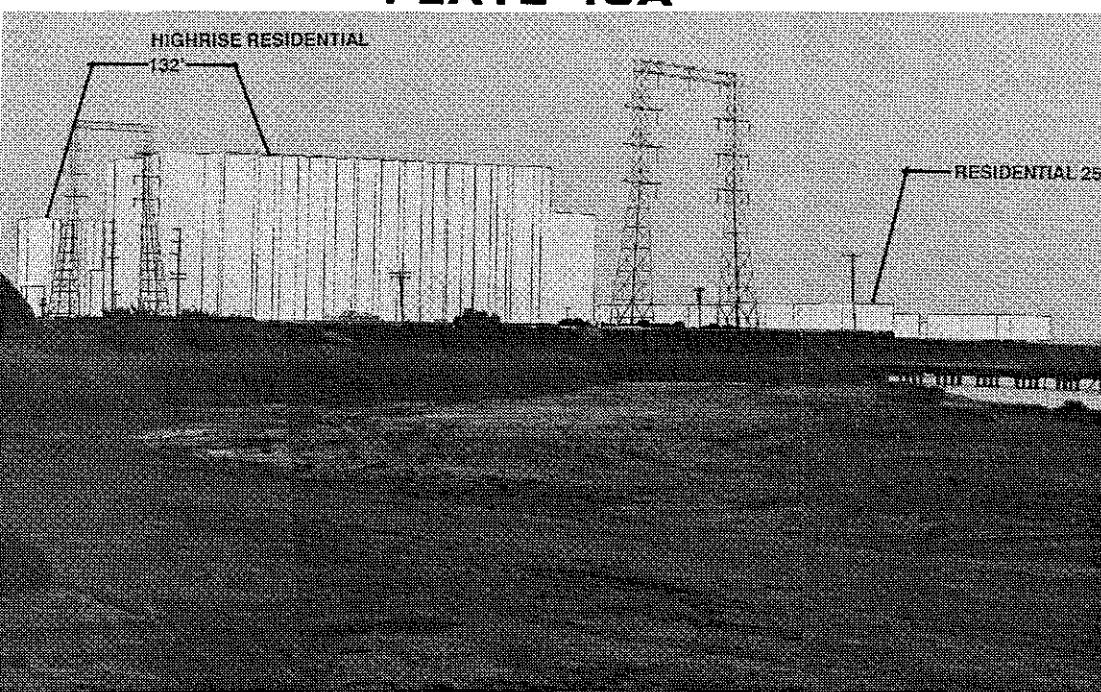
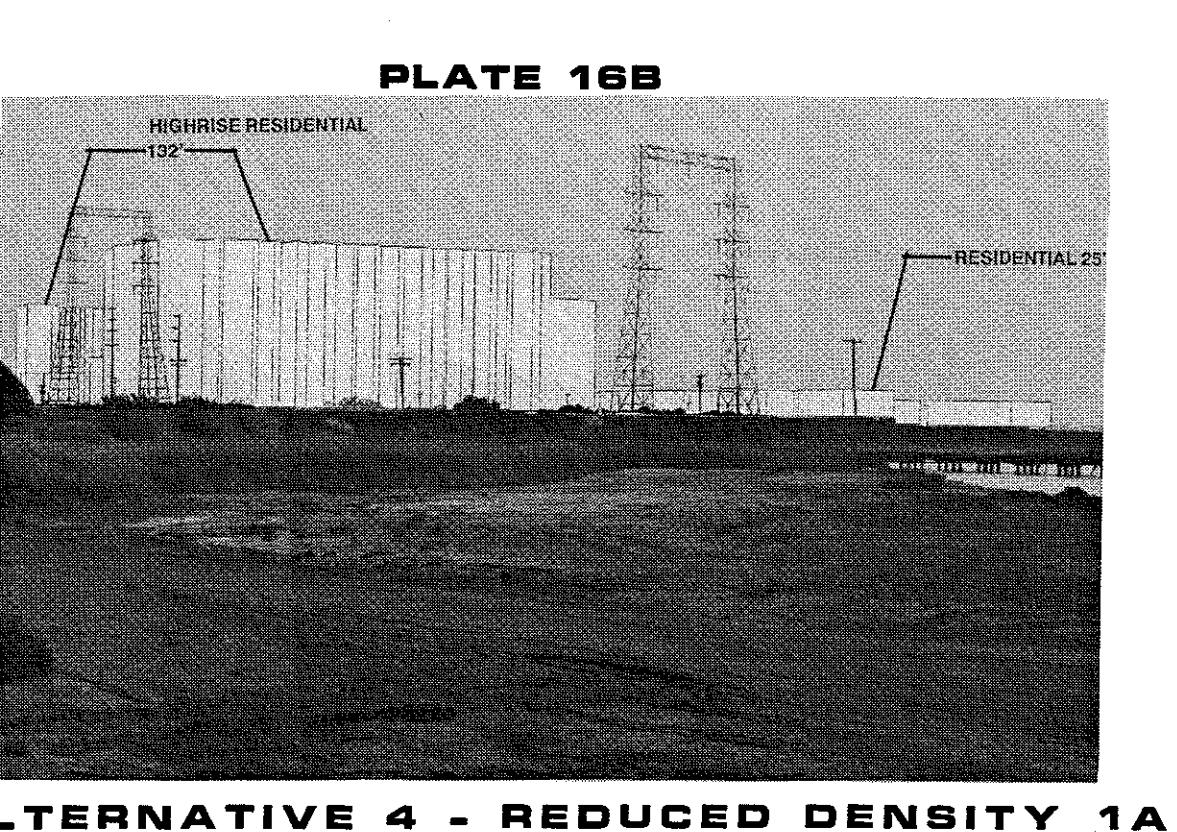
**ALTERNATIVE 1 - NO PROJECT**

**PLATE 15C**

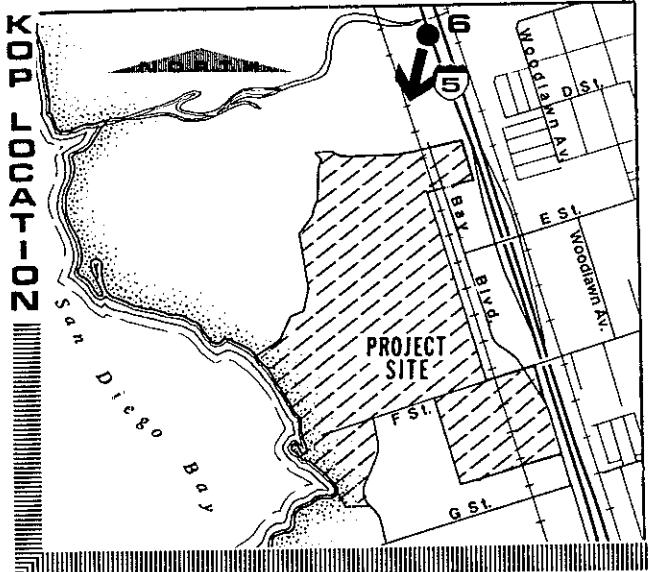
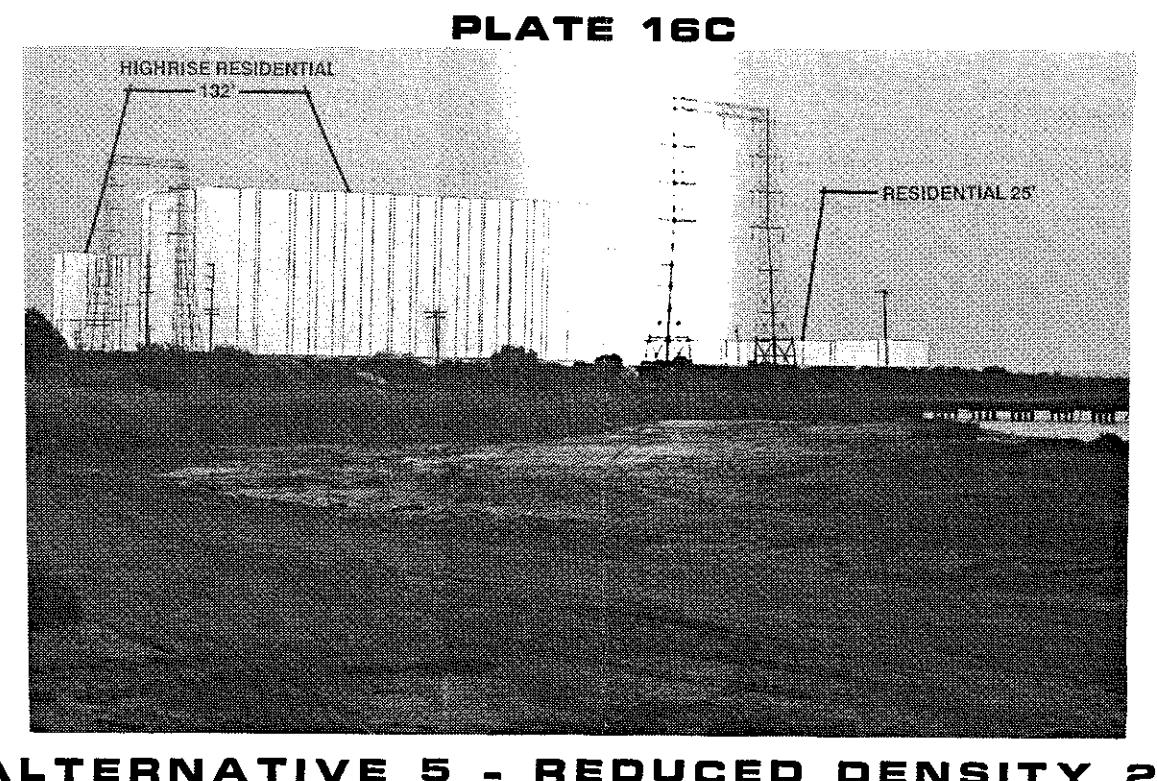


**ALTERNATIVE 2 - EXISTING CERTIFIED LCP**

**ICP SUBMITTAL #8**



**ALTERNATIVE 4 - REDUCED DENSITY 1A**



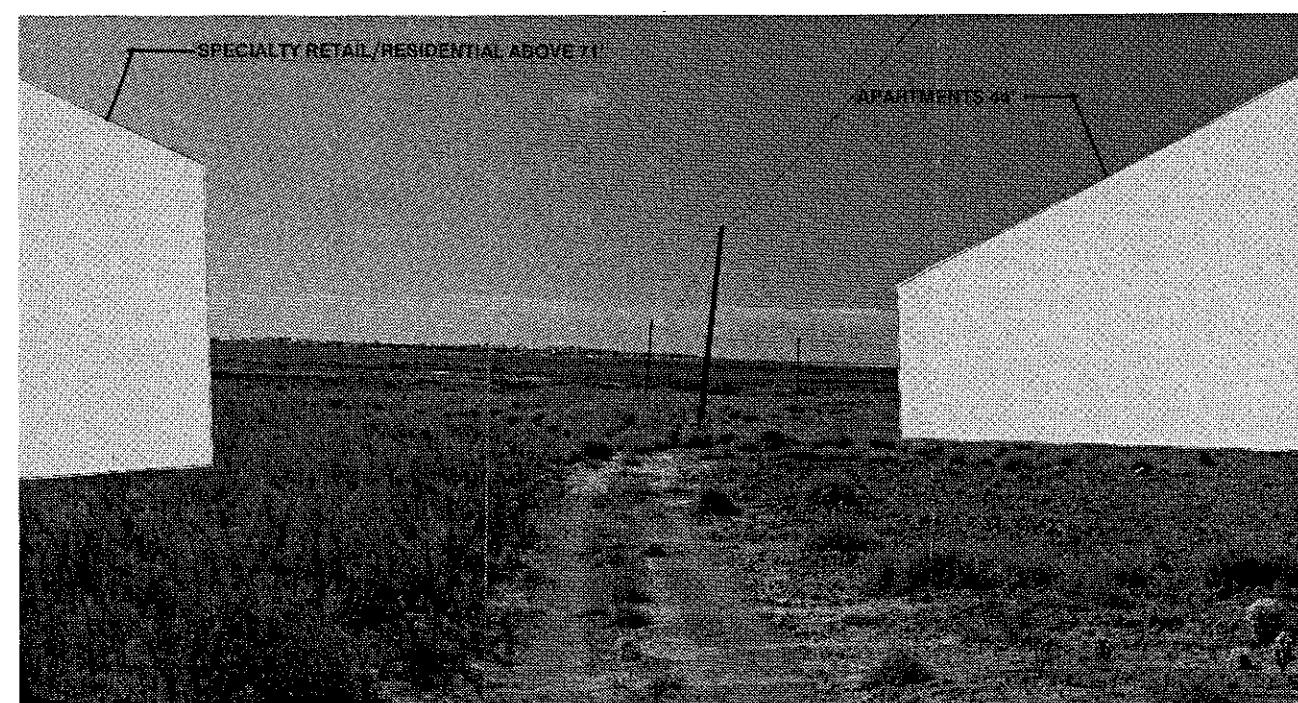
**KOP RESUBMITTAL #8**

**PLATE 17A**



**EXISTING SETTING**

**PLATE 17B**



**PROPOSED PROJECT**

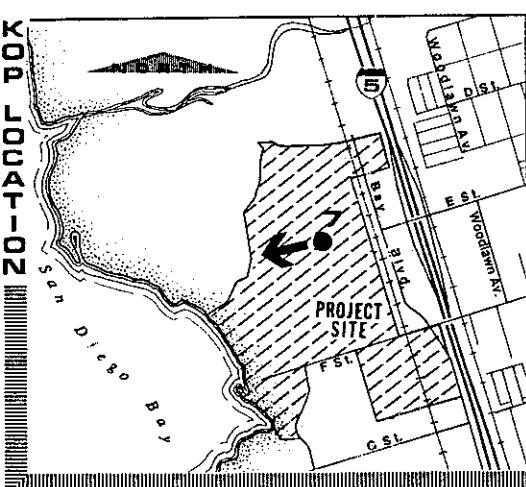
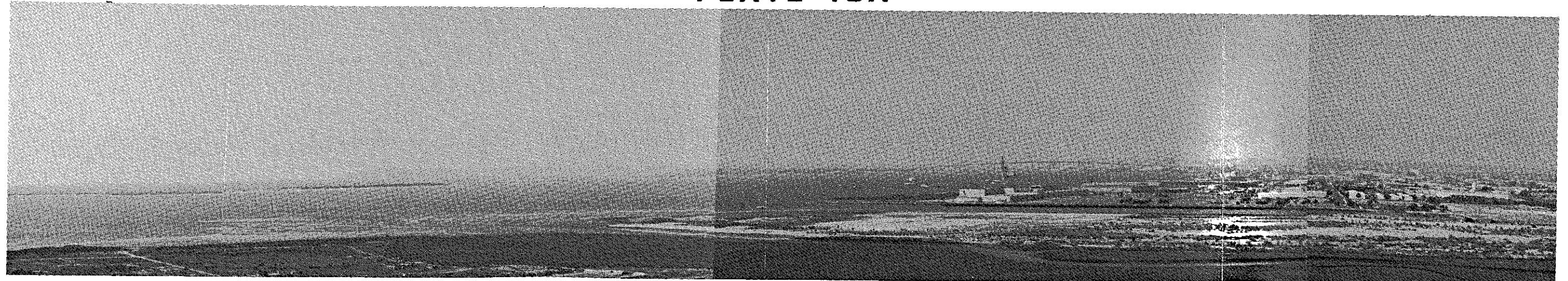
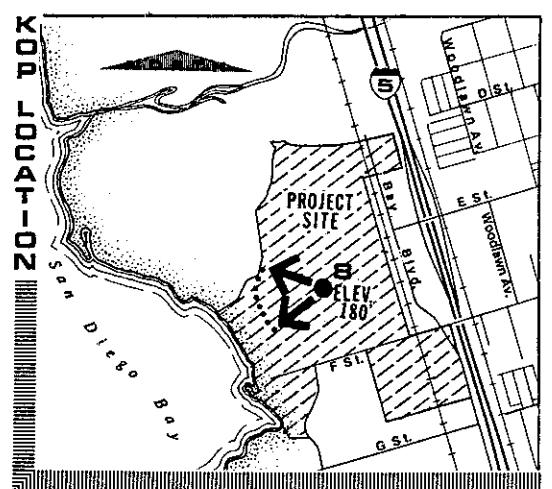


PLATE 18A

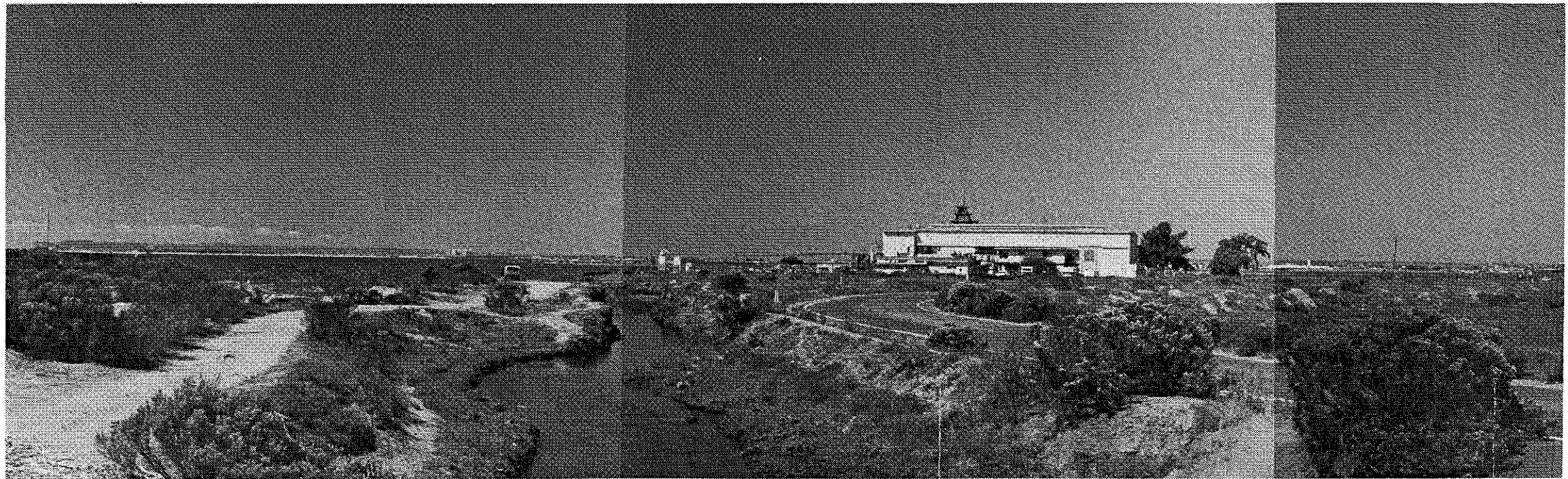


VIEW TOWARD NORTHWEST FROM PROPOSED HIGHRISE BUILDING



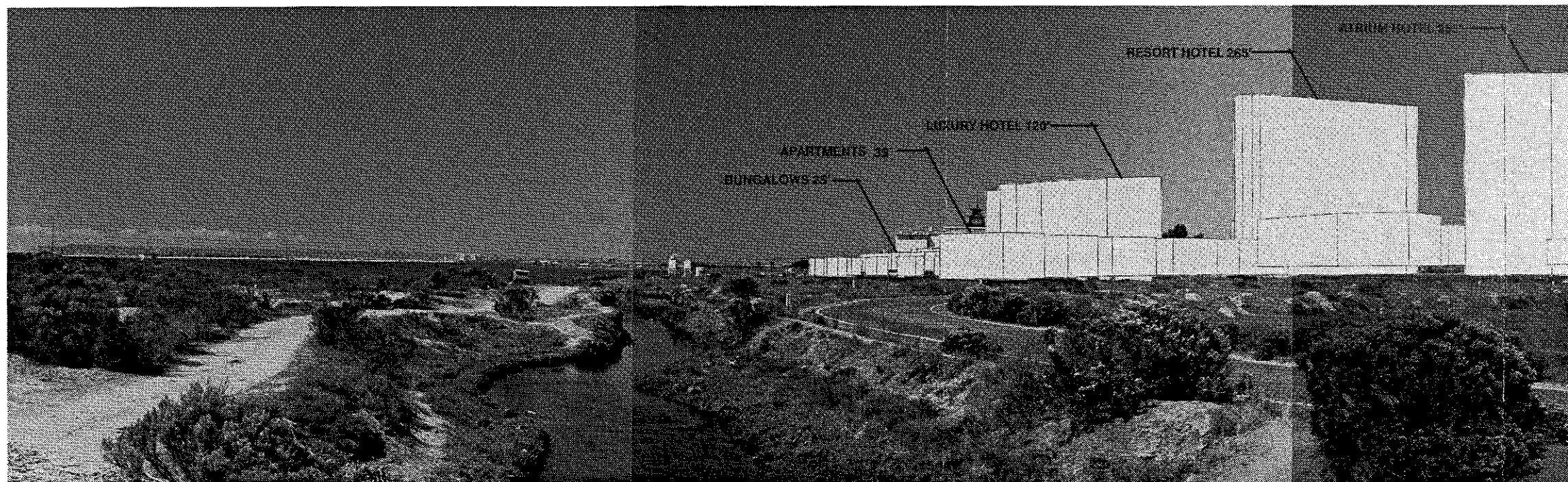
**COR RESUBMITTAL #8**

**PLATE 19A**

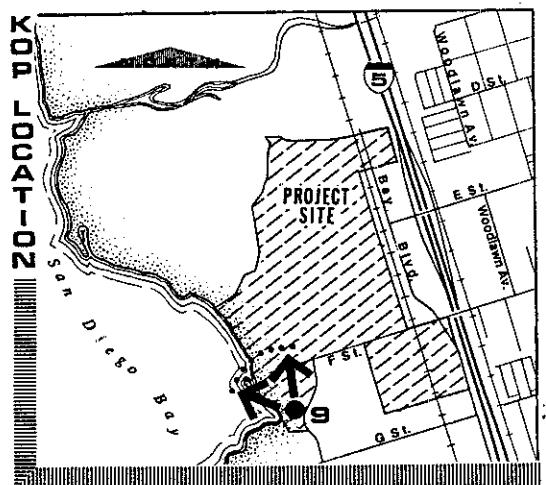


**EXISTING SETTING**

**PLATE 19B**

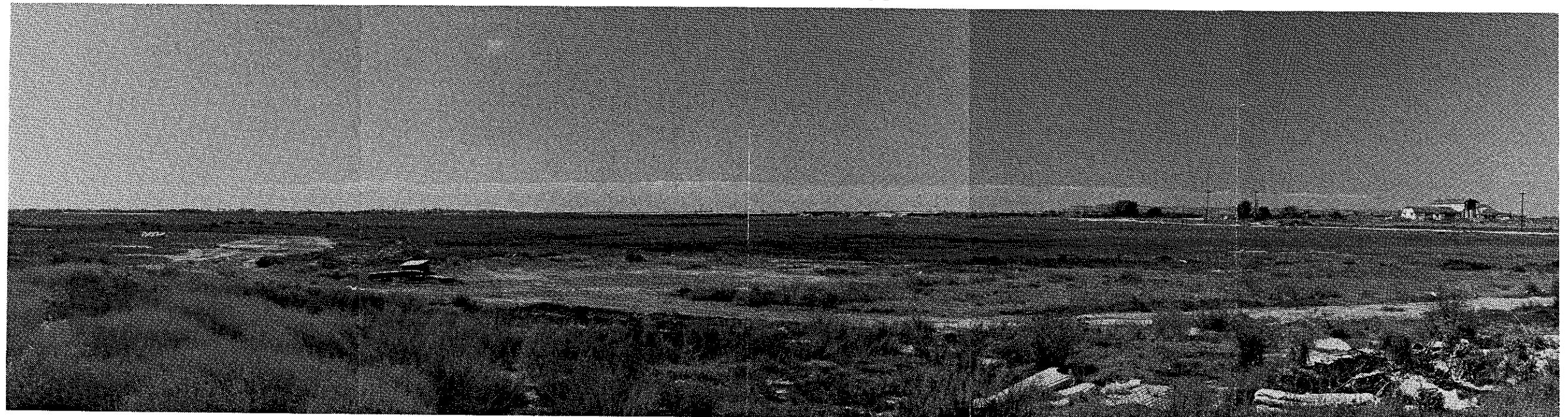


**PROPOSED PROJECT**

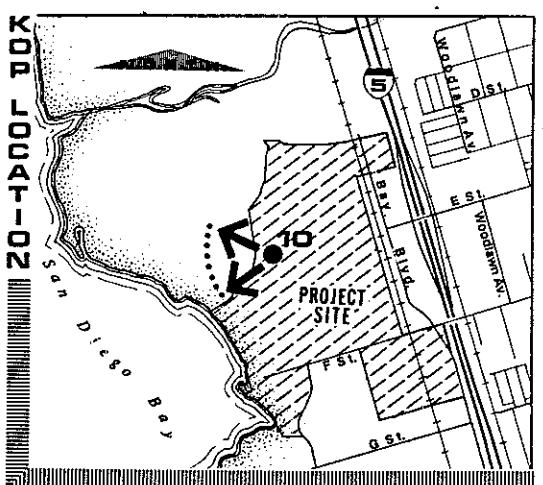


**KOD #8**  
**PLATE 19**

PLATE 20A



PROPOSED PROJECT / EXISTING SETTING



### 3.4 CONVERSION OF AGRICULTURAL LANDS

#### Existing Conditions

The Chula Vista Midbayfront project area contains a mixture of manufacturing, abandoned agricultural and undeveloped areas. The southwest corner of the project area contains a manufacturing business on approximately 3.7 acres. The northeast corner of the project area contains abandoned and partially torn-down greenhouses and agriculture-related buildings on approximately 11 acres; the remaining agricultural structures are slated for demolition. Previous agricultural production on the site included seedless cucumbers, tomatoes, lettuce, cabbage and strawberries. It appears from aerial photos that approximately one-third to one-half of the site was at one time used for agricultural production.

#### Climate

The Midbayfront project area lies within the boundaries of the coastal area climate. This climate is considered favorable to crop production because it is consistently mild. The mean annual precipitation rate is between 10 and 12 inches, and the mean annual air temperature is 60° to 62° F. The frost-free season is 300 to 350 days a year.

#### Soils

The following soils information is based upon the U.S. Department of Agriculture Soil Conservation Service Soil Survey. The soils types found in the Midbayfront area are shown on Table 3-2, as well as the capacity classification and Storie ratings for each soil. Their rated suitability for the five principal crops grown in San Diego County is also provided. Though four of the project soil types have not been analyzed, one of the soils is rated fair for truck crops and flowers and good for tomato cultivation.

The capability class and Storie ratings express the relative suitability of the soils for agricultural purposes. The Storie Index is based on soil characteristics only, and numerically expresses the relative degree of suitability of a soil for general intensive agriculture. Capability ratings encompass such factors as crop suitability, potential for soil damage, soil conservation and crop management. Capability classes are designated by Roman numerals I through VIII, which indicate progressively greater limitations and narrower choices for practical soil use (i.e., soils with a Class I rating would have the fewest limitations, and soils with a Class VIII rating would be restricted to such uses as recreation, wildlife or water supply purposes).

All land which is rated Class I or II in the Capability classification and rated 80 through 100 in the Storie Index rating is defined as "prime agricultural land" under government code Section 512.01 of the California Land Conservation Act of 1965 (Williamson Act). Conversely, land having capability ratings of Class VII or VIII and Storie Index ratings of 5 or 6 are not considered to be suitable for crop production. According to this definition, Huerhuero loam is the only one of the four soil types found in the project area considered suitable for crop production. The others, Huerhuero urban, man-made fill and Tidal Flats,

Table 3-2

**Analysis of Soils in the  
Midbayfront Area**

| Soil Name       | Map Symbol | Percent Scope | Storie Class | Index | Crop Stability If Irrigated |        |             |          |
|-----------------|------------|---------------|--------------|-------|-----------------------------|--------|-------------|----------|
|                 |            |               |              |       | Avocados                    | Citrus | Truck Crops | Tomatoes |
| Huerhuero loam  | HRC        | 2.9           | IIIe-3       | 41    | N                           | N      | F           | G        |
| Huerhuero urban | HuC        | 2.9           | ---          | ---   | *                           | *      | *           | *        |
| Made land       | Md         | Flat          | VIIIe-1      | ---   | *                           | *      | *           | *        |
| Tidal flats     | Tf         | Flat          | VIIIw-6      | <10   | *                           | *      | *           | *        |

G - Good

F - Fair

N - Not rated

\* - Not analyzed

are considered unsuitable for any type of crop production. The project area does not contain any soil considered "prime agricultural land."

Because a wide variety of crops can be grown easily in non-prime soils with proper climate and water, the agricultural potential of the Midbayfront project soils is more accurately reflected by the soil survey ratings because they consider the types of production that could take place in the area. This system rates soils as "good" or "fair" for five crops; avocados, citrus, truck crops, tomatoes and flowers. Those soils which do not meet the "fair" criteria are "not rated" (see Table 3-2).

### **Important Farmlands**

The State of California Department of Conservation prepares a map which locates and defines farmland within the County. Farmland is classified between Prime, the best possible soil for agricultural crop production, and Grazing Land, on which the soil is best suited to the grazing of livestock. Intermediate ratings include Farmlands of Statewide Importance, which are good for the production of agricultural crops; Unique, lesser quality soils used for agricultural cash crops; and Farmlands of Local Importance, non-irrigated soil units that have significant economic importance to the County. The most recent map (1986) indicates five relatively small areas of prime agricultural importance, none of which is located in or near the project area. The closest are located in the Montgomery Planning Area, near the South Bay and approximately 2.3 miles from the Midbayfront.

### **Water Availability**

The Sweetwater Authority (SWA) provides water service for the bayfront area. The production of coastal dependant crops requires large amounts of water. These crops use as much water per acre as does residential development at five or six units per acre (Buckner, 1980). The amount of project area land historically dedicated to agriculture is relatively small; however, if agriculture were to be revived at the site, the SWA would not be expected to have a problem supplying water.

### **Impacts**

The proposed LCPR No. 8 and the associated developer's proposal do not include agricultural uses. This is consistent with the existing certified LCP and the City's General Plan (Update). Past agricultural use has been relatively light in the area, and currently does not exist. It would be economically infeasible for the land owner to retain agricultural uses due to rising water costs in this area and the limited revenues of agricultural production. Thus, the proposed Midbayfront project, ~~as well as all alternatives except the No Project Alternative (Alternative 1)~~ would allow the conversion of land suitable for agricultural use from agricultural to urban uses. This conversion does not represent a significant impact in terms of the loss of potential production of coastal-dependant crops. It does, however, represent an incremental loss of agricultural land to development within San Diego County, which contributes to a regionally significant loss of agricultural lands to urban development.

### 3.5 AIR QUALITY

#### Existing Conditions

##### Meteorology/Climate

The climate of Chula Vista, as with all of California, is largely controlled by the strength and position of the semi-permanent high pressure center over the Pacific Ocean. The high pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, clean daytime onshore breezes and little temperature change throughout the year. Limited rainfall occurs in winter when the high center is weakest and farthest south, and when the fringes of mid-latitude storms occasionally move through the area. Summers are often completely dry, and an average of 10 inches of rain fall each year from November to early April. Unfortunately, the same atmospheric conditions that create a desirable living climate combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted to San Diego County. The onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego, and the sinking air within the offshore high pressure system forms a massive temperature inversion that traps all air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, cause a number of reactive pollutants to undergo photochemical reactions and form smog that degrades visibility and irritates tear ducts and nasal membranes. Because coastal areas are well ventilated by fresh breezes during the daytime, they generally do not experience the same air pollution problems found in some areas east of San Diego. Unhealthful air quality within the San Diego Air Basin's coastal communities such as Chula Vista may occur at times in summer during limited localized stagnation, but occurs mainly in conjunction with the occasional intrusion of polluted air from the Los Angeles Basin into the county, especially to North County. Localized elevated pollution levels may also occur in winter during calm, stable conditions near freeways, shopping centers or other major traffic sources, but such clean air violations are highly localized in space and time. Except for this occasional interbasin transport and possible localized air pollution "hot spots," coastal community air quality is generally quite good.

Local meteorological conditions typically conform well to the regional pattern of strong onshore winds by day, especially in summer, and weak offshore winds at night, especially in winter. These local wind patterns are driven by the temperature difference between the normally cool ocean and the warm interior and steered by any local topography. In summer, moderate breezes of 8-12 mph blow onshore by day, and may continue all night as a light onshore breeze as the land remains warmer than the ocean. In winter, the onshore flow is weaker, and reverses in the evening as the land becomes cooler than the ocean. While daytime winds are mainly off the ocean from the W-NW, winds do, at times, shift into the WSW or even SW where air pollution emissions from Mexico are carried across the border. Given the scope of development and the lack of pollution controls across the border, international transport is an important air pollution concern. Such cross-border emissions do not generally affect the Chula Vista area because it takes several hours of transport for such pollutants to react and become photochemical smog, but, like the pollution recirculation from the Los Angeles Basin, it means that no matter what pollution controls

**Table 3-3**  
**Ambient Air Quality Standards**

| Pollutant                                          | Averaging Time         | California Standards                                                                                                        |                                                                   | National Standards                    |                                     |                                              |
|----------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------|-------------------------------------|----------------------------------------------|
|                                                    |                        | Concentration                                                                                                               | Method                                                            | Primary                               | Secondary                           | Method                                       |
| Ozone                                              | 1 Hour                 | 0.09 ppm<br>(180 ug/m <sup>3</sup> )                                                                                        | Ultraviolet Photometry                                            | 0.12 ppm<br>(235 ug/m <sup>3</sup> )  | Same as Primary Std.                | Ethylene Chemiluminescence                   |
| Carbon Monoxide                                    | 8 Hour                 | 9.0 ppm<br>(10 mg/m <sup>3</sup> )                                                                                          | Non-dispersive Infrared Spectroscopy (NDIR)                       | 9.0 ppm<br>(10 mg/m <sup>3</sup> )    | Same as Primary Stds.               | Non-dispersive Infrared Spectroscopy (NDIR)  |
|                                                    | 1 Hour                 | 20 ppm<br>(23 mg/m <sup>3</sup> )                                                                                           |                                                                   | 35 ppm<br>(40 mg/m <sup>3</sup> )     |                                     |                                              |
| Nitrogen Dioxide                                   | Annual Average         | -                                                                                                                           | Gas Phase Chemiluminescence                                       | 0.053 ppm<br>(100 ug/m <sup>3</sup> ) | Same as Primary Std.                | Gas Phase Chemiluminescence                  |
|                                                    | 1 Hour                 | 0.25 ppm<br>(470 ug/m <sup>3</sup> )                                                                                        |                                                                   | -                                     |                                     |                                              |
| Sulfur Dioxide                                     | Annual Average         | -                                                                                                                           | Ultraviolet Fluorescence                                          | 80 ug/m <sup>3</sup><br>(0.03 ppm)    | -                                   | Pararosaniline                               |
|                                                    | 24 Hour                | 0.05 ppm<br>(131 ug/m <sup>3</sup> )                                                                                        |                                                                   | 365 ug/m <sup>3</sup><br>(0.14 ppm)   | -                                   |                                              |
|                                                    | 3 Hour                 | -                                                                                                                           |                                                                   | -                                     | 1300 ug/m <sup>3</sup><br>(0.5 ppm) |                                              |
|                                                    | 1 Hour                 | 0.25 ppm<br>(655 ug/m <sup>3</sup> )                                                                                        |                                                                   | -                                     | -                                   |                                              |
| Suspended Particulate Matter (PM <sub>10</sub> )   | Annual Geometric Mean  | 30 ug/m <sup>3</sup>                                                                                                        | Size Selective Inlet High Volume Sampler and Gravimetric Analysis | -                                     | -                                   | -                                            |
|                                                    | 24 Hour                | 50 ug/m <sup>3</sup>                                                                                                        |                                                                   | 150 ug/m <sup>3</sup>                 | Same as Primary Stds.               | Inertial Separation and Gravimetric Analysis |
|                                                    | Annual Arithmetic Mean | -                                                                                                                           |                                                                   | 50 ug/m <sup>3</sup>                  |                                     |                                              |
| Sulfates                                           | 24 Hour                | 25 ug/m <sup>3</sup>                                                                                                        | Turbidometric Barium Sulfate                                      | -                                     | -                                   | -                                            |
| Lead                                               | 30 Day Average         | 1.5 ug/m <sup>3</sup>                                                                                                       | Atomic Absorption                                                 | -                                     | -                                   | Atomic Absorption                            |
|                                                    | Calendar Quarter       | -                                                                                                                           |                                                                   | 1.5 ug/m <sup>3</sup>                 | Same as Primary Std.                |                                              |
| Hydrogen Sulfide                                   | 1 Hour                 | 0.03 ppm<br>(42 ug/m <sup>3</sup> )                                                                                         | Cadmium Hydroxide STReactan                                       | -                                     | -                                   | -                                            |
| Vinyl Chloride (chloroethene)                      | 24 Hour                | 0.010 ppm<br>(26 ug/m <sup>3</sup> )                                                                                        | Tedlar Bag Collection, Gas Chromatography                         | -                                     | -                                   | -                                            |
| Visibility Reducing Particles                      | 1 Observation          | In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%  |                                                                   | -                                     | -                                   | -                                            |
| <b>Applicable Only in the Lake Tahoe Air Basin</b> |                        |                                                                                                                             |                                                                   |                                       |                                     |                                              |
| Carbon Monoxide                                    | 8 Hour                 | 6 ppm<br>(7 mg/m <sup>3</sup> )                                                                                             | NDIR                                                              | -                                     | -                                   | -                                            |
| Visibility Reducing Particles                      | 1 Observation          | In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%. |                                                                   | -                                     | -                                   | -                                            |

TABLE 3-4

**Chula Vista Area Air Quality Monitoring Summary — 1984-1988**  
**(Days Standards Were Exceeded and Maxima for Periods Indicated)**

| Pollutant/Standard                      | 1984  | 1985  | 1986  | 1987  | 1988  |
|-----------------------------------------|-------|-------|-------|-------|-------|
| <b>Ozone:</b>                           |       |       |       |       |       |
| 1-Hour > 0.09 ppm                       | 18    | 28    | 20    | 15    | 17    |
| 1-Hour > 0.12 ppm                       | 4     | 4     | 2     | 2     | 4     |
| 1-Hour > 0.20 ppm                       | 0     | 0     | 0     | 0     | 1     |
| Max. 1-Hour Conc. (ppm)                 | 0.15  | 0.20  | 0.14  | 0.16  | 0.22  |
| <b>Carbon Monoxide:</b>                 |       |       |       |       |       |
| 1-Hour > 20. ppm                        | 0     | 0     | 0     | 0     | 0     |
| 8-Hour > 9. ppm                         | 0     | 0     | 0     | 0     | 0     |
| Max. 1-Hour Conc. (ppm)                 | 7.    | 7.    | 7.    | 7.    | 7.    |
| Max. 8-Hour Conc. (ppm)                 | 4.6   | 3.9   | 5.1   | 3.4   | 3.6   |
| <b>Nitrogen Dioxide:</b>                |       |       |       |       |       |
| 1-Hour > 0.25 ppm                       | 0     | 0     | 0     | 0     | 0     |
| Max. 1-Hour Conc. (ppm)                 | 0.20  | 0.16  | 0.14  | 0.15  | 0.21  |
| <b>Sulfur Dioxide:</b>                  |       |       |       |       |       |
| 1-Hour > 0.25 ppm                       | 0     | 0     | 0     | 0     | 0     |
| 24-Hour > 0.05 ppm                      | 0     | 0     | 0     | 0     | 0     |
| Max. 1-Hour Conc. (ppm)                 | 0.07  | 0.08  | 0.06  | 0.04  | 0.09  |
| Max. 24-Hour Conc. (ppm)                | 0.021 | 0.015 | 0.013 | 0.011 | 0.019 |
| <b>Total Suspended Particulates:</b>    |       |       |       |       |       |
| 24-Hour > 100 ug/m <sup>3</sup>         | 0/61  | 0/61  | 1/61  | 1/30  | ----  |
| 24-Hour > 260 ug/m <sup>3</sup>         | 0/61  | 0/61  | 0/61  | 0/30  | ----  |
| Max. 24-Hour Conc. (ug/m <sup>3</sup> ) | 88.   | 96.   | 119.  | 100.  | ----  |
| <b>Lead Particulates:</b>               |       |       |       |       |       |
| 1-Month > 1.5 ug/m <sup>3</sup>         | 0/12  | 0/12  | 0/12  | 0/12  | 0/12  |
| Max. 1-Month Conc. (ug/m <sup>3</sup> ) | 0.60  | 0.38  | 0.28  | 0.19  | 0.13  |
| <b>Sulfate Particulates:</b>            |       |       |       |       |       |
| 24-Hour > 25. ug/m <sup>3</sup>         | 1/61  | 0/54  | 0/60  | 0/51  | 0/57  |
| Max. 24-Hour Conc. (ug/m <sup>3</sup> ) | 18.0  | 15.4  | 17.6  | 13.3  | 17.2  |
| <b>Respirable Particulates (PM-10):</b> |       |       |       |       |       |
| 24-Hour > 50 ug/m <sup>3</sup>          | ----  | ----  | 3/51  | 5/61  | 3/56  |
| 24-Hour > 150 ug/m <sup>3</sup>         | ----  | ----  | 0/51  | 0/61  | 0/56  |
| Max. 24-Hour Conc. (ug/m <sup>3</sup> ) | ----  | ----  | 104.  | 68.   | 58.   |

Source: California Air Resources Board, Summary of Air Quality Data, 1984-1988.  
 Chula Vista Monitoring Station except for Lead & Sulfate Particles  
 which are from San Diego APCD Island Avenue Station.

---- = no data

not been officially published) of monitoring data from the Chula Vista (80 East "J" Street) station. Progress toward cleaner air is seen in almost every pollution category. The only national clean air standard that was exceeded throughout the five-year monitoring period was the hourly ozone standard which was exceeded an average of 3-4 times per year (once per year is allowable). The more stringent state standards for ozone and for total suspended and respirable particulates (dust) were exceeded on a somewhat higher frequency, but overall air quality in Chula Vista is nevertheless very good in comparison to other areas of the SDAB.

Air Quality Management Planning: The continued violations of national AAQS in the SDAB, particularly those for ozone in inland foothill areas, require that a plan be developed outlining the stationary and mobile source pollution controls that will be undertaken to improve air quality. In San Diego County, this attainment planning process is embodied in a regional air quality management plan developed jointly by the APCD and SANDAG with input from other planning agencies. This plan, originally called RAQS (Regional Air Quality Strategies), was last updated about seven years ago and called the 1982 State Implementation Plan Revisions (1982 SIP Revisions). The underlying premise of this plan was that the County can have continued economic and population growth and still achieve basinwide clean air. The plan outlined the analysis methodology and charted the necessary steps to reduce the existing excess emissions burden plus offset the air pollutants associated with continued growth. The 1982 SIP Revisions recognized that there are meteorological patterns under which county emissions were uniquely responsible for ozone violations, and there were also conditions where interbasin transport was a major factor in observed air quality. The basic conclusion of the 1982 SIP was that emissions will have been sufficiently reduced by the end of 1987 such that all county-related ozone violations will have been eliminated, but that violations due to transport from the Los Angeles Basin will continue as long as that basin continues to experience very unhealthful ozone levels.

With the expiration of the 1987 target attainment date, the SIP Revisions are now again being revised in another update cycle. The new plan is designed to lead to incremental improvement toward a long-range attainment target date and to ensure that programs are in place to continually off-set the emissions increases associated with continued growth of the basin. Current planning calls for sufficient emissions reductions to meet the federal ozone standard by 1996-97 under weather conditions when there is no significant influx of pollution from the Los Angeles Basin. The passage of the California Clean Air Act requiring future compliance with the more stringent state ozone standard will entail additional planning and control to meet the standard early into the 21st century. The proposed bayfront development relates to the SIP Revisions through incorporation of sub-regional development plans into regional growth estimates. If the project has been correctly anticipated in the current SANDAG growth forecasts (the basis for SIP transportation emissions forecasts), then it will not cause any unanticipated regional air quality impacts. If, however, the proposed redevelopment significantly exceeds the intensity of development predicted for the Chula Vista bayfront or occurs sooner than predicted by regional growth forecasts, it will be inconsistent with the SIP Revisions.

of this dust is comprised of large particles that are easily filtered by human breathing passages and settle out rapidly on parked cars and other nearby horizontal surfaces. It thus comprises more of a soiling nuisance than any potentially unhealthy air quality impact. Although a considerable portion of the construction activity fugitive dust does settle out near its source, the smallest particles remain suspended throughout much of their transit across the air basin. Construction dust is, therefore, an important contributor to regional violations of inhalable dust (PM-10) standards. Because of its role in PM-10 violations, fugitive construction dust emissions should be controlled as carefully as possible.

Equipment exhaust as well will be released during temporary construction activities, particularly from mobile sources during site preparation and from on-site equipment during actual construction. Although the construction activity emission rates may be substantial (especially NO<sub>x</sub> from diesel-fueled trucks and on-site vehicles), they will be widely dispersed in space and time by the mobile nature of much of the equipment itself. Furthermore, daytime ventilation during much of the year in Chula Vista is usually more than adequate to disperse any local pollution accumulations near the project site. Any perceptible impacts from construction activity exhaust will, therefore, be confined to an occasional "whiff" of characteristic diesel exhaust odor, but not in sufficient concentration to expose any nearby receptors to air pollution levels above acceptable standards. As portions of the residential component are completed, the limited distance between site construction sources and nearby receptors make it important to minimize any localized concentrations of emissions (such as from trucks idling and queuing while waiting to unload dirt or to drop off building materials, and from project trucks blocking traffic on nearby streets that might cause high microscale levels of automotive exhaust). If measures are implemented to prevent multiple trucks from blocking traffic or from idling near occupied receptor sites, then construction activities should not create any unacceptable air quality impacts during project build-out.

### Vehicular Emissions Impacts

By far the greatest project-related air quality concern derives from the mobile source emissions that will result from the additional 43,000 daily trips that will be generated at project completion. At a typical residential and commercial trip length of around 6 miles per trip (a combination of longer commuting and shorter retail trips), the project may add around 250,000 vehicle miles traveled (VMT) to the regional traffic burden. Some of the trip generation and associated VMT may be overstated because some of the project-related traffic (such as hotel visitors) will be already present on the regional roadway system and would use similar facilities at some other San Diego County location if not at the Midbayfront project sites, but the project nevertheless represents a major contributor to additional vehicular air pollution emissions within the SDAB.

Automotive emissions can be readily calculated using a computerized procedure developed by the California ARB for urban growth mobile source emissions. This emissions model, called URBEMIS2 was initialized with trip generation factors specified by the traffic consultant, and run for a build-out year of 2000 and emissions were compared to the alternatives under consideration. The results from the model runs are summarized in Table 3-5 with the model output for each run included in Appendix E to this report.

TABLE 3-5

**Mid-Bayfront Redevelopment    Regional Air Pollution  
Emissions**

| <b>Scenario<br/>Year</b>                    | <b>Emissions (tons/day)</b>  |                            |                            |
|---------------------------------------------|------------------------------|----------------------------|----------------------------|
|                                             | <b>Reactive<br/>Organics</b> | <b>Carbon<br/>Monoxide</b> | <b>Nitrogen<br/>Oxides</b> |
| <b>Proposed LCPA</b>                        | <b>0.39</b>                  | <b>4.93</b>                | <b>0.49</b>                |
| <b>Existing Approved LCP</b>                | <b>0.30</b>                  | <b>3.75</b>                | <b>0.38</b>                |
| <b>Alternative 3</b>                        | <b>0.31</b>                  | <b>3.83</b>                | <b>0.39</b>                |
| <b>Alternative 4</b>                        | <b>0.31</b>                  | <b>3.83</b>                | <b>0.39</b>                |
| <b>Alternative 5</b>                        | <b>0.25</b>                  | <b>3.06</b>                | <b>0.32</b>                |
| <b>Year 2000 San Diego<br/>Air Basin</b>    | <b>212.25</b>                | <b>817.70</b>              | <b>142.75</b>              |
| <b>Year 2000 Project<br/>Share of Basin</b> | <b>0.18%</b>                 | <b>0.60%</b>               | <b>0.34%</b>               |

Assuming 92% of TOG = ROG

Source: URBEMIS2 Computer Model and 1982 APCD SIP Revisions.

Project traffic will add about 5 tons of carbon monoxide (CO) and 0.4 ton each of nitrogen oxides ( $\text{NO}_x$ ) and reactive organic gases (ROG) to the airshed for a 2000 build-out. Continued emissions reduction from the retirement of older, polluting cars will gradually reduce the overall project regional emissions impact slightly, but the project will continue to represent a small, but not negligible, portion of regional automotive emissions. Table 3-5 also shows that the project represents a small fraction of the regional emissions burden. The percentage fraction is small, but it is the sum of multiple small percentage emissions increments that comprise the basinwide burden and lead to the basin's continued violations of clean air standards, which is a significant regional impact. Thus, the project represents an incremental contribution to a regionally significant impact.

In terms of consistency with the growth assumptions of the SIP Revisions; the SIP is based on generic trip making characteristics for specified types of land uses. The proposed redevelopment will increase the intensity of land uses from those used in the SIP based on the existing approved LCP. The difference between the proposed LCP Resubmittal/Development Plan and the approved SIP represents "excess" emissions that have not been included in the regional air quality plan. However, since the demand for commercial space, hotel rooms and modern housing already presumably exists (it will not be created by the proposed development), and since much of the traffic to the site is already on the roadway system to access similar land uses elsewhere in the area, the redevelopment project is consistent with good air quality growth planning. By definition of consistency, the impact of project-related automotive emissions to the SIP, while substantial, is judged not significant.

While the project itself would have an incremental impact, the increase of traffic around the project site may create localized violations of ambient health standards. To evaluate the potential for the formation of any air pollution "hot spots," the California line source dispersion model CALINE4 was used to estimate receptor exposure at various intersections near the Chula Vista bayfront potentially impacted by redevelopment traffic. This model was initialized with maximum traffic and minimum dispersion conditions with and without project traffic in order to generate a worst-case impact assessment. CO was used as the indicator pollutant to determine if there was any air pollution "hot spot" potential. The results of the modeling exercise are summarized in Table 3-6. The hourly CO exposure near the five analyzed roadways where maximum localized CO impacts are likely to occur currently total from less than 1.0 to over 10.0 ppm above the regional background level. Continued emissions reductions from newer, less polluting automobiles will create a continuing reduction in future microscale CO levels despite projected increases in traffic levels. Future CO levels at most analysis locations will be similar to existing levels despite any projected traffic increases. If the roadway system can accommodate increased traffic volumes, future microscale CO levels, with or without the redevelopment, will be similar to what they are today. Since the "With Project" levels are well below any level of concern, any alternative development scenario impacts with lesser intensity are not an important air quality consideration.

TABLE 3-6

Mid-Bayfront Redevelopment Microscale Air Quality  
Impact Analysis

(Hourly CO Concentrations in ppm - Standard = 20  
ppm)

| Roadway Segment             |     | Existing Traffic | Future W/Project |
|-----------------------------|-----|------------------|------------------|
| 1. <u>"E" Street</u>        |     |                  |                  |
| I-5 -- Woodlawn             |     | 10.2             | 6.7              |
| Bay Blvd. -- I-5            |     | 2.8              | 4.5              |
| 2. <u>Marina Parkway</u>    |     |                  |                  |
| Bay Blvd. -- East Access    | **  |                  | 2.2              |
| East Access -- F Street     | **  |                  | 1.8              |
| F Street -- Bay Blvd. (S)   | 0.7 |                  | 1.1              |
| 3. <u>"F" Street</u>        |     |                  |                  |
| Woodlawn -- Bay Blvd.       | 0.5 |                  | 0.7              |
| Bay Blvd. -- Marina Parkway | 0.3 |                  | 0.6              |
| 4. <u>"H" Street</u>        |     |                  |                  |
| I-5 -- Woodlawn             | 3.2 |                  | 2.6              |
| 5. <u>"J" Street</u>        |     |                  |                  |
| I-5 -- Woodlawn             | 1.6 |                  | 1.5              |

\*\* = Not yet built

Source: Project Traffic Study and CALINE4 Roadway Emissions Dispersion Model.

## **Co-generation Plant Impacts**

Concerns expressed about the co-generation plant air quality impact derive from both gaseous and small particulate air emissions dispersed over a wide area as well as the potential for any local deposition of heavier particulate matter. The regional impact is controlled by the APCD in its permitting authority. Plant construction and operation will require submittal of an application for an Authority to Construct and a Permit to Operate in response to APCD Rule 10 as promulgated in accordance with the California Health and Safety Code Section 42300 et. seq. The application must demonstrate conformance with applicable local rules, state law (including the California Clean Air Act -- AB-2595), as well as any federal new source performance standards (NSPS). The plant will not be built unless all APCD requirements are met. These requirements include the use of best available control technology (BACT), and could include requirements for permit applicants to provide concurrent emissions reductions (off-sets) for all species which currently exceed allowable levels within the air basin. The underlying premise of the APCD issuing a permit is that it is assumed that no adverse air quality impacts will result from the project if an air permit is issued.

Specific emissions data for the co-generation plant are not yet available because a vendor has not yet been selected. However, the approximate emissions characteristics can be estimated based on similar plants of comparable size. This estimate was used to initialize a computerized atmospheric dispersion screening model called PTPLU. The PTPLU output shows that ambient concentrations of NO<sub>x</sub> will not exceed the applicable ambient standard by itself. NO<sub>x</sub> is the pollutant of greatest concern because NO<sub>x</sub> emissions are high in CO generation facilities and the basin is a non-attainment area for NO<sub>x</sub>. The analysis does show, however, that the plant could measurably increase existing violations of the NO<sub>x</sub> standard. The analysis also showed that NO<sub>x</sub>, ROG and CO emissions will ~~likely probably~~ exceed the 150 pound/day threshold emission level that will trigger new source review (NSR) requirements under the APCD's Rule 10 (see table, following page). This is considered a potentially significant impact. The NSR review must document no adverse air quality impacts as defined by APCD rules and probably will require the retirement of an equivalent (or greater) amount of NO<sub>x</sub> emissions elsewhere in the air basin (offsets). With offsets, the potential co-generation plant impact could be mitigated to a level below significant.

Deposition of particulates on sensitive vegetative matter will be negligible. The performance standard for the co-generation plant will limit particulate matter to less than 1 pound/day. This is the same emission level as an additional 3 cars per minute driving by on I-5 for 24 hours. Much of this exhaust particulate will be very small and will not deposit out near the site. An estimate of the ambient level of excess particulate matter from the stack exhaust was made by running PTPLU, an EPA- and ARB-approved computer screening model that calculates the worst-case ambient impact from point sources of emissions such as exhaust stacks. The results of this screening analysis were as follows:

Regionally additive emissions from site traffic or stationary sources with the rest of the basin are evaluated in terms of planning consistency with the new regional air plan under development. The regional plan will incorporate the most recent version of the LCP for the Chula Vista bayfront, including any revisions likely to be adopted during the effective lifetime of the air quality plan. By virtue of incorporation of this proposed LCPR No. 8 (or any of the alternatives including Alternatives 2, 3, 4, 5, 7, 8 or 9 adopted as an amendment to the LCP) into the air plan currently being prepared, no adverse impacts are predicted from consistency with this plan. See the DEIR, Volume I, Sections 4.2.5 and 5.2.5 for discussion of alternatives 8 and 9.

### Mitigation

The proposed redevelopment project creates a potentially significant air quality impact from development of the co-generation plant. Mitigation is required by the APCD before an authority to Construct and a Permit to Operate is issued. Mitigation would include concurrent reductions in NO<sub>x</sub>, ROG, and CO to "offset" project (co-generation plant) emissions. Mitigation must be achieved before the plant may be built. Mitigation would thus reduce the potential impact to a level below significant. Mitigation would also reduce the cumulative impact from the vehicular emissions added to the co-generation plant emissions.

Additionally, there are transportation control measures (TCMs) and temporary construction activity impact mitigation measures that must be incorporated into the proposed project to mitigate the project's incremental contribution to the regionally significant air basin impact. Measures that must be incorporated in project planning include:

- Dust control measures required by the AQMD will be implemented during construction, and monitored via the Mitigation Monitoring Program. Such measures include maintaining adequate soil moisture as well as removing any soil spillage onto traveled roadways through site housekeeping procedures.
- Reducing interference with existing traffic and preventing truck queuing around local receptors must be incorporated into any project construction permits. Construction traffic must be monitored via the Mitigation Monitoring Program; trucks must turn off engines while waiting, or not be allowed to enter the site again. This regulation could be undertaken by the on-site biological monitor. The permits should limit operations to daytime periods of better dispersion that minimizes localized pollution accumulation.
- Various transportation control measures (TCMs) must be incorporated into the project. Such measures would be aimed primarily at employees on the project site, but might also include site residents and visitors in certain instances. Measures that should be included are:
  - Airport shuttle services for destination resort visitors
  - Ridesharing
  - Vanpool Incentives
  - Alternate Transportation Methods
  - Work Scheduling for Off-Peak Hour Travel

### 3.6 NOISE

#### Existing Conditions

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions by weighting sounds within the range of human sensitivity more heavily (middle A and its higher harmonics) in a process called "A-weighting" written as dB(A).

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or alternately, as a statistical description of the sound level that is exceeded over some stated fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise metric called the Community Noise Equivalent Level (CNEL). An interior CNEL of 45 dB(A) is mandated for multiple family dwellings, and is considered a desirable noise exposure for single family dwelling units as well. Since typical noise attenuation within residential structures is about 15-20 dB, an exterior noise exposure of 65 dB CNEL is typically the design exterior noise exposure for new residential dwellings in California. Because commercial or industrial uses are not occupied on a 24-hour basis, a less stringent noise/land use compatibility criterion is generally specified for these less noise sensitive land uses.

These guidelines form the basis for the Noise Element of the City of Chula Vista's General Plan, which suggests a desirable exterior noise exposure of 65 dB(A) for residential and other noise sensitive uses. The City's noise policy states as its first objective that every citizen has a right to live in an environment where noise is not detrimental to his or her life, health, and enjoyment of property. Within the policy's implementation provisions, there is a mandate for the City to consider the effects of noise, especially from transportation sources, in its land use decisions in order to realize the above objective.

Existing noise levels within the Midbayfront project area derive from surface vehicular sources on adjacent roadways, primarily on I-5. In order to characterize current noise levels in and around the redevelopment area, a brief on-site noise survey was conducted on May 4, 1989. Short-term (30 minute Leq) noise levels within the planning area were monitored at three locations using standard Caltrans roadway noise monitoring protocols. The purpose of this monitoring was two-fold. On-site monitoring provides a "real-world" characterization of baseline noise levels that take into account site-specific vehicle mixes, travel speeds, noise obstructions, etc. Secondly, the monitoring provides a calibration data base by which a computer model of traffic noise can be validated. The calibrated model

## **Construction Noise Impacts**

**Temporary** Construction noise impacts will vary markedly because the noise strength of construction equipment ranges widely as a function of the used and its activity level. **Short term** Construction noise impacts tend to occur in phases dominated initially by demolition of existing structures and large earth-moving sources, then by foundation and parking lot construction, and finally by finish construction. The demolition and earth-moving sources are the noisiest, with equipment noise typically ranging from 75 to 90 dB(A) at 50 feet from the source. Pile drivers may have equipment noise levels in excess of 100 dB at 50 feet from the source. Point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance. The quieter noise sources will, thus, drop to a 65 dB exterior/45 dB interior noise level by about 200 feet from the source while the loudest will require over 1000 feet from the source to reduce the 90+ dB(A) source strength to an acceptable 65 dB(A) exterior exposure level. Construction noise sources are not strictly relatable to a community noise standard because they occur only during selected times and the source strength varies sharply with time. The penalty associated with noise disturbance during quiet hours and the nuisance factor accompanying such disturbance usually leads to time limits on construction activities imposed as conditions on construction and use permits. The weekday hours from 7 a.m. to 7 p.m. are typically the allowed times for construction activities if there are occupied dwellings within a reasonable exposure zone surrounding the construction site.

Materials handling and small stationary noise sources have lower initial noise levels, and their corresponding noise impact zones during later phases of construction are, therefore, much smaller. Equipment size is also often smaller (compressors, generators, etc.) such that they lend themselves to placement in areas where existing structures or larger pieces of equipment may screen a portion of the noise transmission.

Although construction noise impacts occur primarily on-site and are largely masked by the existing I-5 background, the noise sensitivity of the surrounding ecological habitat may create unique noise concerns. In particular, birds may be startled by sudden loud equipment noise and their nesting or breeding behavior may be upset by intermittent noise intrusion. Birds can often acclimate themselves to elevated noise if the noise is steady or rhythmic. Sudden changes are thus a greater concern than magnitude. Behavioral sensitivity also varies with season and related bird behavior. Given that construction cannot be readily performed without making noise, especially to erect footings in saturated soils, the most effective wildlife impact mitigation is to schedule the noisiest construction activities when birds are least likely to be breeding or nesting near or on the project site. These biological impacts and mitigation measures are discussed in detail in the following section, Biology.

## **Vehicular Noise Impacts**

Long term noise concerns from the increased development intensity of the community area center primarily on mobile source emissions on the major roadways in the redevelopment area. These concerns were addressed using the FHWA Highway Traffic Noise Model previously cited in the environmental setting section. The model calculates the Leq noise

TABLE 3-7

Roadway Noise Exposure (CNEL dB[A]) at 100 Feet from SANDAG Buildout

| Roadway Segment             | Existing | Ex. + Proj<br>Level | Impact | SANDAG Buildout<br>Level | Impact |
|-----------------------------|----------|---------------------|--------|--------------------------|--------|
| 1. I-5 North of H St.       | 78.1     | 78.5                | +0.4   | 79.9                     | +1.8   |
| 2. I-5 South of H St.       | 77.9     | 78.3                | +0.4   | 80.2                     | +2.3   |
| 3. E St. East of I-5        | 67.9     | 67.6*               | -0.3   | 67.6                     | -0.3   |
| 4. E St. I-5 - Bay Bl.      | ----     | 66.5                | ----   | 67.1                     | ----   |
| 5. E St. West of Bay Bl.    | ----     | 66.1                | ----   | 65.4                     | ----   |
| 6. F St. East of I-5        | 58.7     | 61.2                | +2.5   | 62.8                     | +4.1   |
| 7. F St. West of Bay Bl.    | 56.9     | 60.9                | +4.0   | 62.3                     | +5.4   |
| 8. H St. East of I-5        | 65.8     | 66.0                | +0.2   | 66.9                     | +0.1   |
| 9. H St. West of I-5        | ----     | 62.2                | ----   | ----                     | ----   |
| 10. J St. East of I-5       | 63.8     | 64.4                | +0.6   | 66.4                     | +2.6   |
| 11. Tidelands W. of Bay Bl. | 60.2     | 63.1                | +3.1   | 63.9                     | +3.9   |
| 12. Bay Bl. East to F St.   | 58.1     | 61.9                | +3.8   | 59.6                     | +1.5   |
| 13. Bay Bl. F to H St.      | ----     | 60.2                | ----   | 61.2                     | ----   |
| 14. Bay Bl. H to J St.      | 58.0     | 59.1                | +1.1   | ----                     | ----   |

\* = Includes ADT reduction from I-5/SR-54 direct connectors

---- = no data

Source: FHWA-RD-77-108 Highway Traffic Noise Model (Caltrans microcomputer version OFA 1/21/85, mod. 7/87)

TABLE 3-8  
Distance from Centerline to 65 dB(A) CNEL Contour

| Roadway Segment             | Existing | Ex. + Proj<br>Dist. | Proj<br>Impact | SANDAG Buildout<br>Dist. | Buildout<br>Impact |
|-----------------------------|----------|---------------------|----------------|--------------------------|--------------------|
| 1. I-5 North of H St.*      | 297'     | 316'                | +19'           | 392'                     | +95'               |
| 2. I-5 South of H St.**     | 457'     | 486'                | +29'           | 651'                     | +194'              |
| 3. E St. East of I-5        | 156'     | 149'*               | -7'***         | 149'                     | -7'***             |
| 4. E St. I-5 - Bay Bl.      | ---      | 126'                | ----           | 138'                     | ----               |
| 5. E St. West of Bay Bl.    | ----     | 118'                | ----           | 106'                     | ----               |
| 6. F St. East of I-5        | <50'     | 56'                 | >6'            | 71'                      | >21'               |
| 7. F St. West of Bay Bl.    | <50'     | 53'                 | >3'            | 66'                      | >16'               |
| 8. H St. East of I-5        | 113'     | 117'                | +4'            | 134'                     | +21'               |
| 9. H St. West of I-5        | ----     | 65'                 | ----           | ----                     | ----               |
| 10. J St. East of I-5       | 83'      | 91'                 | +8'            | 124'                     | +41'               |
| 11. Tidelands W. of Bay Bl. | <50'     | 75'                 | >25'           | 84'                      | >34'               |
| 12. Bay Bl. East to F St.   | <50'     | 62'                 | >12'           | <50'                     | ----               |
| 13. Bay Bl. F to H St.      | ----     | <50'                | ----           | 56'                      | ----               |
| 14. Bay Bl. H to J St.      | <50'     | <50'                | ----           | ----                     | ----               |

\* = Includes 6 dB reduction for topographical screening

\*\* = Includes 3 dB reduction for topographical screening

\*\*\* = Includes I-5/SR-54 connector

---- = no data

Source: FHWA-RD-77-108 Highway Traffic Noise Model (Caltrans microcomputer version OFA 1/21/85, mod. 7/87)

### Mitigation

Noise impacts from increased project area traffic represent only a minor increase in existing exposure. No mitigation of long-term traffic noise is indicated beyond citing new residential uses either with enough set-back to meet the City's land use compatibility criterion or through the use of perimeter walls to achieve noise exposure guidelines.

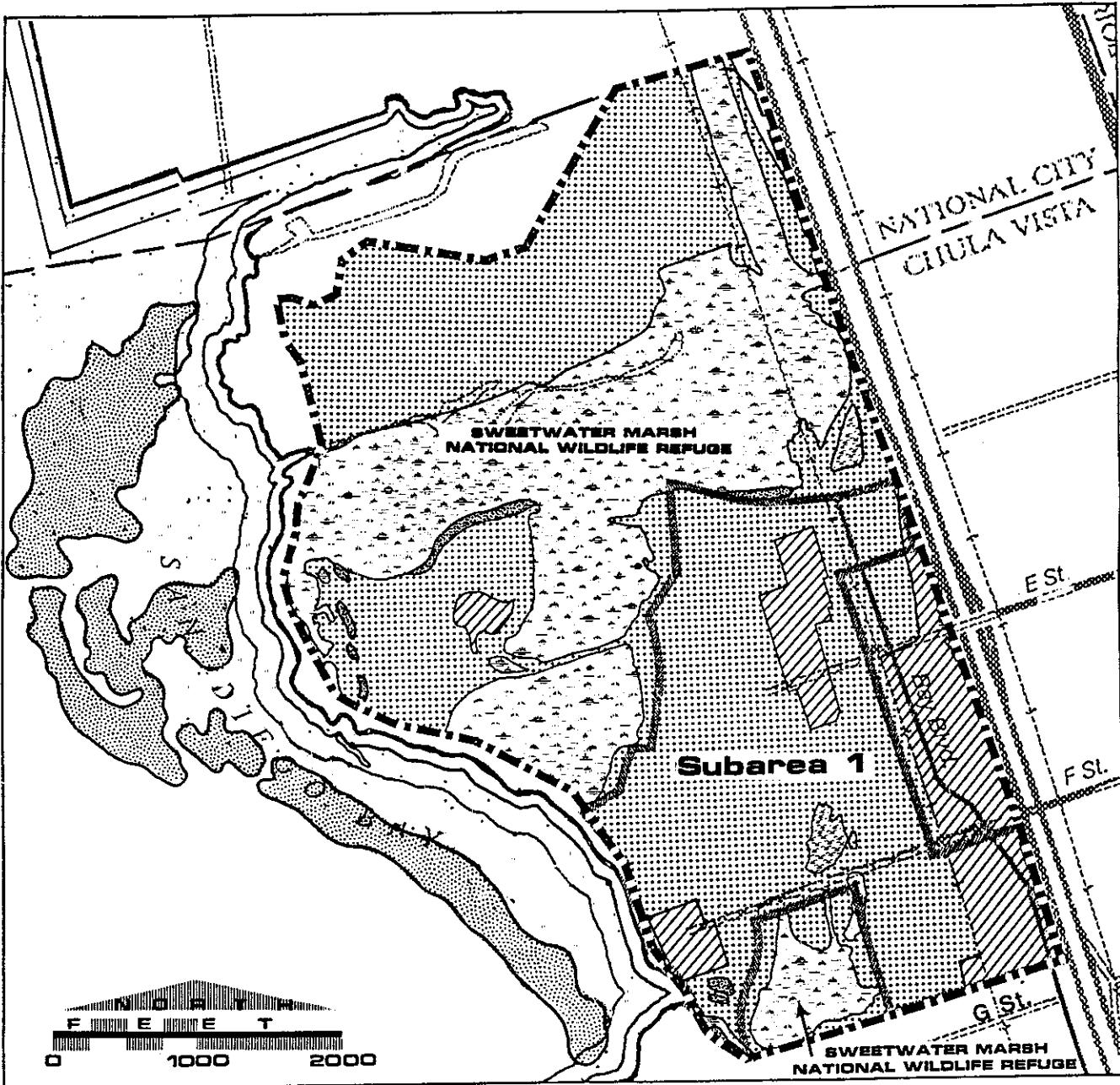
**Short-term** Construction noise intrusion should be limited by conditions on construction permits to weekday hours with least noise sensitivity. Those same permits should also specify construction access routing to minimize construction truck traffic past existing residential park or other noise sensitive uses.

Child care center noise exposure should be minimized by establishing a noise performance standard on co-generation exhaust stack noise met through the use of silencers, and by using a noise barrier along the eastern play area boundary to screen out traffic noise. A performance standard of 45 dB at night and 50 dB by day at 400 feet from the exhaust stack is recommended to prevent excessive exhaust noise intrusion. The measures should be implemented and monitored via a Mitigation Monitoring Program.

### Analysis of Significance

Potentially significant noise impacts could occur from construction activities, and from incompatible land uses (specifically the child care center in close proximity to noise from I-5 and from the co-generation facility exhaust stack for the proposed project and Alternatives 3, 4, 5 and 8). These measures can be mitigated to a level below significant by limiting construction activities to certain times, limiting construction access routes, establishing a noise performance standard on the co-generation stack, and by implementing a noise barrier along the eastern end of the child care facility.

LCP  
RESUBMITTAL #8



- Brackish Marsh
  - Coastal Salt Marsh
  - Eelgrass Meadow
  - Urbanized Areas
  - Disturbed Areas/Agriculture
  - Diegan Sage Scrub/Succulent Sage Scrub
- LCP Resubmittal Boundary

VEGETATION

Figure 3-V

surrounded by non-native, annual grasses and fragmented Maritime Succulent Scrub vegetation.

#### Freshwater and Brackish Marsh

A few areas of Freshwater and Brackish Marsh occur within and adjacent to the Midbayfront planning area. The largest of these occurs northeast of the planning area within a locale being heavily impacted by construction traffic for the joint Sweetwater River Flood Control/State Route 54 project. The second major marsh area is located north of "F" Street across from the "F" & "G" Street Marsh. This site is referred to as the seasonal Freshwater Marsh, although it is substantially brackish in nature.

Other minor marshlands occur adjacent to the "F" & "G" Street salt marsh and in an extremely small roadside depression near the Santa Fe Railroad right-of-way and "F" Street. This last site is almost imperceptible and is characterized only by the well-defined dominance of the facultative wetland indicator plants, *Distichlis spicata* and *Rumex crispus*. The larger Freshwater/Brackish Marsh areas are characterized by the presence of sizeable stands of California Bulrush (*Scirpus californicus*), Alkali Bulrush (*S. robustus*), Soft-flat Cattails (*Typha latifolia*), and Spiny Rush (*Juncus acutus*).

~~Large areas of the lower seasonal "Freshwater" Marsh are currently dominated by the sensitive *Suaeda esteroa*, which has recently expanded in population following the few years of drought. This species is also showing up along the fringes of the "F" & "G" Street Marsh, Vener Pond, the southern edges of the "E" Street Marsh, and on the southeastern salt pannes of the Sweetwater Marsh; however, nowhere is its presence as pronounced as it is in the seasonal marsh.~~

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#### Coastal Salt Marsh

The National Wildlife Refuge north of the site supports approximately 198 acres of Coastal Salt Marsh habitat. These marshlands are dominated primarily by Pickleweed (*Salicornia virginica*), but also include a diverse assemblage of subordinate elements including Annual Pickleweed and Glasswort (*Salicornia bigelovii* and *S. subterminalis*), Arrow-grass (*Triglochin maritima*), Saltwort (*Batis maritima*), and Sea-lavender (*Limonium californicum*). In higher areas, unvegetated salt pannes are common and, in vegetated areas, Salt-cedar (*Monanthochloe littoralis*), Saltgrass, Alkali-weed (*Cressa truxillensis*), and Sea-blight are common along with Alkali-heath (*Frankenia salina*). Numerous tidal channels meander through the marshlands, both increasing the complexity of the dominating mid-marsh habitats and providing unique resources for fish and invertebrate fauna. Along the channel

species, including the depleted *Ferocactus viridescens* and *Opuntia parryi* var. *serpentina*, as well as *Lycium californicum* and *Dudleya edulis*. Sensitive plants are discussed in the Sensitive Biological Resources section of this section.

## Zoological Resources

### General Wildlife Habitat

Major wildlife habitats occurring in and adjacent to the Midbayfront planning area include Coastal Salt Marsh, Freshwater and Brackish Marsh, shallow water and mudflats, and disturbed uplands. Of these habitats, the wetlands and associated marine habitat areas are of principal importance.

#### Coastal Salt Marsh

Coastal Salt Marsh wildlife habitat is coincident with the distribution of salt marsh vegetation (Figure 3-V). These areas total approximately 198 acres and are located adjacent to the northern and southern limits of the Midbayfront subarea. Characteristic species of these habitats include the Belding's Savannah Sparrow, which occurs as a resident in all of the bayfront salt marshes, the Light-footed Clapper Rail, which has recently been recorded only in the Sweetwater and "E" Street Marshes, the Willet (*Catoptrophorus semipalmatus*), the Marbled Godwit (*Limosa fedoa*), the Great Blue Heron (*Ardea herodias*), and the Long-billed Curlew (*Numenius americanus*). The abundance of invertebrates and fish occurring in the marshlands provides ample food for foraging birds, specialized in the collection of these resources. Along the fringes of the marshlands terrestrial mammals, including the Desert Cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), and Botta's Pocket Gopher (*Thomomys bottae*), forage on the lush marsh plants; also present in these areas are the sensitive Wandering Skipper Butterfly (*Panoquina errans*), and four species of Tiger Beetle (*Cicindela hemorrhaica hemorrhaica*, *C. latesignata latesignata*, *C. trifasciata signoidea*, *C. gabbi*), of which the latter three are considered sensitive.

Besides providing unique habitat in its own right, the salt marshes of the bayfront provide supporting refuge, foraging grounds, spawning grounds, and nesting habitat for numerous species more typically associated with open water or shoreline areas of the bay and coastal areas. During most evenings and higher tidal periods, the marshlands receive heavy use by roosting and loafing shorebirds, higher portions of the marsh are utilized as nesting areas by such shorebirds as the Black-necked Stilt (*Himantopus mexicanus*). Storm events also force many marine associated birds to take refuge in the calmer marshlands. This point was well illustrated by the extremely harsh December 1987 storm event which forced several thousand birds, predominantly waterfowl, shorebird, and gull species into the "E" Street Marsh and Vener Pond (Merkel, pers. obs.).

The tidal channels, creeks, and even frequently exposed portions of the marshes are utilized as spawning areas and nursery grounds by numerous coastal fish and invertebrates. A diverse and abundant community of resident invertebrates persists in the salt marsh habitats as well. Most notable are the concentrations of California Horn Snails (*Cerithidea*

## Disturbed Uplands

Disturbed uplands within the bayfront range from recently disced agricultural fields to abandoned structures and trash piles, as well as maintained buildings and landscaping. The sheer diversity of these areas combined with their coastal location and size have attracted a wide variety of resident and migratory birds as well as an abundant mammalian and herpetofauna. Over 90 upland-associated avian species have been reliably reported from the Chula Vista bayfront (Table 2, Appendix C). Several of these species are not expected to make extensive use of the area and, in fact, records are often more reflective of the attraction of the area to keenly observant bird enthusiasts, than the presence of suitable habitat for the species observed.

Raptors were observed to forage over the open fields, and passernines make use of all aspects of the disturbed uplands. Seed-eating birds including numerous finches (*Carduelis* and *Carpodacus* spp.), Mourning Dove (*Zenaida macroura*), and a variety of sparrows, make use of the fields while insect gleaners utilize the fields, shrubs and trees. The few scattered trees and tall shrubs are important structural elements in the upland habitats, which provide singing, foraging, and sentry points for numerous avian species.

Several piles of debris occur along the shoreline fringes of the Midbayfront and on Gunpowder Point. These junk piles support an abundance of Western Fence Lizards (*Sceloporus occidentalis*). Also common are Southern Alligator Lizards (*Elgaria multicarinata*) around landscaped portions of the bayfront. A particularly noteworthy occurrence is the California Legless Lizard (*Aniella pulchra*) within the finer sandy soils near the shoreline areas of the Midbayfront and Gunpowder Point.

## Fauna

### Invertebrates

Incidental observations of marine invertebrates were made to help characterize the salt marsh and shoreline marine habitats present in and around the Midbayfront Planning Area. The species observed are reported in Table 2 of Appendix C and represent only a small fraction of the hundreds of macro-invertebrates expected to occur in the mudflat, marsh, and tidal channel habitats present. These observations were limited to the epibenthic organisms and infaunal organisms which were readily identified by sight or remains.

The marine species observed reflect a healthy, vigorous salt marsh habitat. No sensitive marine invertebrates were observed during the field investigations; however, several terrestrial species inhabiting the wetland and wetland fringes are considered sensitive. These species, three species of Tiger Beetle (*Cicindela* spp.) and the Wandering Skipper (*Panoquina errans*), are discussed in the Sensitive Biological Resources subsection.

### Fish

Like the marine invertebrates, fish were not systematically sampled, but species observed or reliably reported have been noted and are expected to be representative of the

Observations of a variety of birds reflect migratory movements of passerines, and incidental transitory occupancy by other species. A variety of the species noted are all but extirpated from the bayfront, although they occur more frequently at interior locations.

Eleven raptors, and four species of owl have been recorded in the bayfront in recent years. There has been an apparent decline in usage of the area by several of these species over the past few years. Notably, these include the Northern Harrier (*Circus cyaneus*), Red-shouldered Hawk (*Buteo lineatus*), Black-shouldered Kite (*Elanus caeruleus*), and American Kestrel (*Falco sparverius*) (Merkel, pers. obs.). These declines are probably related to the reduction of prey including Desert Cottontail, California Ground Squirrel, and Pocket Gophers associated with the more frequent and intense management of field habitats in the Midbayfront. There has been an increase in the activities of the endangered Peregrine Falcon, an event undoubtedly related to the 1989 successful nesting of the species on the Coronado Bridge, the first in San Diego County for over 40 years. Other raptorial birds have maintained an apparently stable level of incidental occurrence in the bayfront region as migratory movements and wide home ranges carry them over the site. Raptor nesting in and around the bayfront is limited to that of the common Red-tailed Hawk (*Buteo jamaicensis*), the American Kestrel, the Burrowing Owl (*Athene cunicularis*), and possibly the Red-shouldered Hawk.

Also nesting in the area are Common Ravens (*Corvus corax*), Scrub Jays (*Aphelocoma coerulescens*), and Loggerhead Shrikes (*Lanius ludovicianus*), three semi-raptor-like species which constitute important predators in the area. Burrowing Owls have been known to nest on the steep banks of the northern portion of the Midbayfront, throughout the disturbed lands on Gunpowder Point (NWR), and on the "D" Street Fill. Efforts to eradicate owl nesting on the "D" Street Fill (NWR), near the California Least Tern Nesting Colony, have been fairly successful, and currently nesting burrowing owls are a fairly uncommon sight in the bayfront (E. Lichtwardt, K. Merkel, pers. obs.). This species is, however, more commonly seen on the Chula Vista Wildlife Reserve Island.

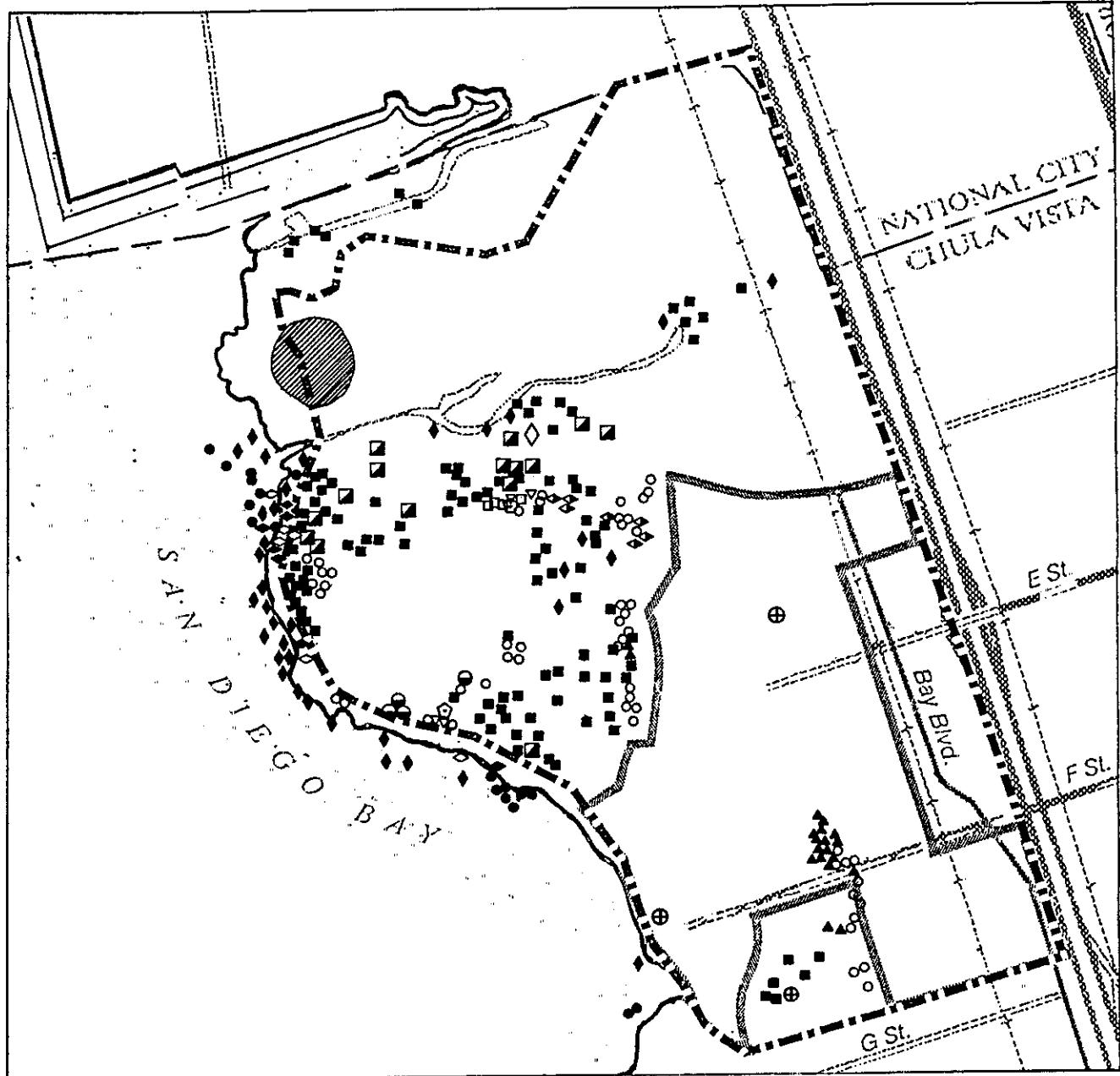
Several sensitive birds occur in and around the Midbayfront Planning Area; these species have been studied widely and inventories provide a fairly detailed account of the distribution patterns of the most sensitive of the birds. The presence of breeding populations of Belding's Savannah Sparrows, Light-footed Clapper Rails, and California Least Terns is of high interest and concern. Also of interest are the distribution patterns of the endangered Peregrine Falcon and California Brown Pelican. These and other sensitive avian species are discussed separately within the Sensitive Biological Resources section.

An additional concern, and one which has not been addressed well in previous studies relates to avian flight patterns within and around the Midbayfront Planning Area. More discussion of this concern occurs later in this section, and in detail in Appendix C.

## Mammals

Fifteen native mammalian species were detected on the site (Table 2, Appendix C). Of these, all are common to San Diego County. Notable among the native species are the occurrences of the Long-tailed Weasel (*Mustela frenata*), which exist as a breeding pair on

# CUPRESSUM MITTAL #8



## FAUNA

- ◆ California Least Tern
- ⊕ Peregrine Falcon
- California Brown Pelican
- Light-footed Clapper Rail
- Belding's Savannah Sparrow
- California Legless Lizard
- Wandering Skipper Butterfly
- ◊ Mudflat Tiger Beetle
- ◆ Sand Dune Tiger Beetle
- ◊ Gabb's Tiger Beetle

## FLORA

- ▽ Snake Cholla
- Coast Barrel Cactus
- ◇ Palmer's Frankenia
- ▲ California Sea-blite
- ◊ Salt Marsh Bird's Beak

● Least Tern Colony

NOTE: Symbols indicate use areas and are not indicative of populations.

— SENSITIVE SPECIES —

Figure 3-VI

Due to the high value of these systems and the rapid losses they have undergone, almost any impacts to these systems would be considered significant. In addition, in most cases such impacts would be subject to permitting requirements of various federal, state and local entities in addition to the CEQA review process.

#### Freshwater and Brackish Marsh

These habitats are frequently associated with estuarine or drainage systems which receive regular influxes or which capture seasonal and sporadic inputs of freshwater. These areas are often quite productive and provide foraging and nesting habitat for a fairly specific suite of organisms including several species of waterfowl, rails, and a specific group of passerine birds. In addition, these areas are often utilized fairly extensively by several sensitive reptiles.

With the tremendous coastal development which has occurred over the past several years, many of these areas have been lost or highly modified. On site, the small brackish marsh is heavily utilized on a seasonal basis by a host of waterfowl and wading birds. This marsh area, historically a portion of the "F" & "G" Street Marsh, may support literally a thousand or more birds during winter storms (Merkel and Reiser, pers. obs.). Even during non-storm events, the pond may be utilized by hundreds of waterbirds at any given time. For these reasons, impacts to such a resource would be considered significant and adverse.

#### Shallow Water/Mudflats

The shoreline of San Diego Bay, which borders on the property, consists of a wide mudflat meeting a narrow sand fringe and a steep bank. These mudflats are highly productive environments and receive heavy use as an avian foraging and loafing area during low tides. Mudflats, like the coastal saltmarshes, are naturally limited in extent and have suffered tremendous losses due to human activities. In Mission Bay, almost all of the approximately 5000 acres of historic mudflat habitat has been removed to create a recreational embayment. In San Diego Bay, similar losses in the north and central bay have virtually eliminated all mudflats from these areas. Within south San Diego Bay, the wide expanses of mudflat and shallow water, combined with the general low disturbance levels, have created a refuge area for resident as well as migratory birds utilizing the Pacific Flyway.

#### Eelgrass Meadows

Eelgrass Meadows are among the most productive communities in the world. These areas provide the basis for major detrital based food-webs, and are more directly utilized as forage by a number of birds, including the Brant's Geese (*Branta bernicla*) (which is all but an obligatory consumer of eelgrass). While direct grazing on eelgrass is quite common among the waterfowl utilizing the area, a much more intricate and extensive system of trophic links is found between invertebrates, algae, fish, and birds when the structural and secondary substrate characteristics of the bed are taken into consideration. Eelgrass beds are known to be important nursery grounds for fish and macro-invertebrates which return to bays and estuaries to spawn.

Status: Declining. More information needed.

A buffer around the salt marsh habitat which is rigidly enforced to remove ongoing site degradation (as at the "F" & "G" Street Marsh) would allow additional expansion of this species. *Suaeda esteroa* seems to be presently expanding into peripheral upland areas adjacent to undisturbed areas of Sweetwater Marsh. The population on the bayfront is considered biologically significant for this recently-described taxon.

#### Sensitive Wildlife

Numerous sensitive animals occur or have the potential for occurring within the project boundaries. However, sensitive animals which occur outside the boundaries may be affected by the project. These are discussed, with their sensitivity status and on-site status, in Table 4 of Appendix C. Species warranting additional consideration are discussed below.

#### Reptiles

##### Coast Horned Lizard (*Phrynosoma coronatum*)

Status: Depleted due to pet collection and habitat destruction.

This species has been noted during previous surveys in the bayfront, but due to the prevailing disturbed habitat conditions, it is not expected to currently occur or persist at any sort of a viable population level.

#### Birds

##### California Brown Pelican (*Pelecanus occidentalis californicus*)

Listing: USFWS (1986) - Endangered  
CDFG (1988) - Endangered  
Everett (1979) - Threatened

Status: This species population density tends to fluctuate with various environmental conditions, such as water temperature and fish abundance. In the 1960s there was a drastic decline along the California and Gulf coasts due primarily to eggshell thinning caused by DDT. Populations have been increasing and, currently, Brown Pelicans are doing well.

The Brown Pelican primarily utilizes the open waters of San Diego Bay and is uncommon in the adjacent marsh itself.

##### Reddish Egret (*Egretta rufescens*)

Listing: USFWS (1986) - Category II  
Audubon Blue List (Tate 1986)

The Northern Harrier frequently forages over the site but does not nest on site, and three nests were reported to occur at Sweetwater Marsh NWR in 1990. Two nests, one in "E" Street Marsh and one in the Sweetwater Marsh, raised a total of five chicks.

#### Peregrine Falcon (*Falco peregrinus*)

- Listing:** CDFG (1988) - Endangered  
USFWS (1986) - Endangered
- Status:** This falcon has declined as a breeder in California due largely to the use of DDT.

Since DDT has been banned, their number has increased in California (Cade, 1982). Peregrines are frequently observed on the site as migrants. A pair of Peregrines nested this year under the Coronado Bridge and may forage as far south as the site and the salt works. These falcons are often associated with bodies of water and the presence of the Sweetwater Marsh and mudflat areas may attract them to the site as a foraging ground.

#### Snowy Plover (*Charadrius alexandrinus*)

- Listing:** Everett (1979) - Declining  
Audubon (Tate 1986) - Species of Special Concern  
Remsen (1980) - 2nd Priority  
USFWS (1986) - Category II
- Status:** Uncommon to declining on the coast as a nesting species.

Permanent resident in the area, but probably does not breed on site.

#### Long-billed Curlew (*Numenius americanus*)

- Listing:** Audubon Blue List (Tate 1986)  
USFWS (1986) - Category II
- Status:** This species is considered down in numbers by many observers; however, it is still a fairly common wintering species along the coast in San Diego County.

Common in low numbers within all of the saltmarsh habitats of the bayfront.

#### Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)

- Listing:** CDFG (1977, 1988) - Endangered  
USFWS (1986) - Category II  
SDNGWS (1976) - Special Concern  
Everett (1979) - Threatened
- Status:** The 1986 census estimated 2,274 pairs in 27 marshes in southern California. Eight marshes have populations of 100 pairs or more, comprising 75 percent of the total. The upper marsh habitat is rare in southern California, being the easiest to fill and claim for land uses. Extirpations have occurred in at least 3-4 locations in the last 10 years. Sixty-three percent of the marshes

|                                  |      |      |       |
|----------------------------------|------|------|-------|
| Direct to San Diego Bay          | 22.4 | 34.5 | 12.1  |
| "E" Street/Vener Pond/Sweetwater | 57.4 | 7.6  | -49.8 |
| Internal Drainage to Lagoons     | 0.0  | 11.0 | 11.0  |

\*Information from Rick Engineering 1989a, b; Walter Crampton, pers. comm.; and independent review.

### Increased Freshwater Input

The actual changes in the amount of water flowing through each system are likely to be dramatically different than the basin areas would suggest. Development would create substantially greater amounts of water-impermeable substrate. Thus, where rainwater is currently absorbed by the soft dry ground of the unirrigated agricultural fields and a level of saturation is almost never achieved, the asphalt, concrete and irrigated landscaping of the proposed development will more readily shed water, leading both to more frequent and heavier freshwater runoff conditions than those currently occurring in the Midbayfront area.

Vegetation and wildlife within wetlands can be significantly altered by wide fluctuations in the salinity regimes of the marshlands due to changes in drainage. Further, observations within altered systems indicate that salt marsh habitats can be readily converted to brackish or even freshwater systems through the diversion of substantial freshwater flows into the system for a prolonged period (Merkel and Reiser, pers. obs.).

The proposed project would lead to more frequent and larger pulses of freshwater into brackish and salt marsh areas of the "F" & "G" Street Marsh and the seasonal "Freshwater" marsh to be reconfigured as a detention basin. In addition, a new low-level continuous input of freshwater originating from irrigation runoff, automobile washing, street and sidewalk cleaning, etc. will occur. These changes in the hydrologic regime of the Midbayfront will probably result in seasonal reductions in soil salinities beyond those which normally occur, thus triggering seedling germination and growth of salt marsh as well as fresh and brackish marsh species. Once established, several species which would not normally occur in the saltmarsh system may persist and can thrive during future periods of reduced salinity (Beare and Zedler, 1987). Continuous influxes of freshwater to the system may result in the expansion of the freshwater and brackish systems at the expense of the salt marsh system. Additionally, such inputs promote the invasion of wetlands by weedy species which are introduced by seed to the low salinity areas surrounding storm drain outlets.

While large increases in the freshwater input can be detrimental to the existing saltmarsh systems in the bayfront, the reduction in such inputs may be equally, if not more devastating. Many of the marsh plant species require reduced salinity for seedling germination and rapid growth (Purer, 1942; Zedler *et al.*, 1980, 1984, 1986; Zedler, 1986; Beare and Zedler, 1987; Zedler and Nordby, 1986; Zedler and Beare, 1987). For this reason, the loss or reduction of freshwater input is likely to lead to a gradual shift in the marshland structure as older plants senesce and seedling recruitment is skewed towards one or a few species with germination potential at high salinity levels. This shift could lead to major disruptions of the system and the eventual collapse of major system links. Shifts in predominant vegetation could make the marsh unsuitable to avian nesting, as well as foraging uses. Further, the

the fairly high wave action experienced by this area, the impacted area will be larger than would be expected in steeper more stable areas where erosion would soon create a defined non-circumferential channel. It would be expected that the area would generally broaden from the width of the energy dissipating apron to a much wider and more diffuse deltaic region farther down the mudflat. The total lengths of mudflat below the apron area expected to be affected are 1,200 feet at the northern discharge and 620 feet at the southern discharge point. The apron area, which is expected to be directly impacted by fill material would be approximately 57 feet long and 60 feet wide at the bayward end of the northern discharge. The smaller southern rip-rap apron would be approximately 48 feet long and 50 feet wide at the terminal end (based on USDA-SCS standards which are proposed for use in design of these aprons).

Based on the "best-guess" assumption that the affected area would widen at a 10 degree angle from the end of the apron as water runs down the mudflat, the total mudflat area anticipated to be affected would be 3.3 acres (2.5 acres at the northern discharge and 0.8 acre at the southern discharge). It should be recognized that not all values would be lost from these portions of the flats and that the vast majority of current habitat usage by avifauna and fishes would be expected to continue. Generally low resource values would be limited to a much narrower, frequently meandering, low-flow area with larger impacts being limited to periods when high storm discharges corresponded with low tides.

Two potential measures are available to mitigate these drainage impacts: (1) reducing the impacts to a one time short-term loss by extending the pipes out past the mudflats and replacing sediments over the pipeline; or (2) replacing lost long-term resource values by creating suitable compensatory habitat elsewhere in the southbay region.

The approach recommended in this situation would be to extend the drainage pipes into deeper water and restore the mudflat and eelgrass areas impacted by construction. This approach would have a greater short-term loss but would ensure no long-term impacts to the mudflats and would additionally eliminate potential sedimentation and erosion impacts to eelgrass habitats located below the mudflats. Such measures would require excavation of a narrow trench through approximately 1425 linear feet of mudflat and soft bottom shallows at the northern discharge and excavation of a 670 foot long trench at the southern alignment (Figures 6a and b). Due to the instability of the sediments in these areas, trench walls would probably require stabilization during construction. Suitable bedding materials and pipes would be placed in these trenches and the pre-project contours would be restored using the material removed from the excavation. Impacted mudflat would be expected to rapidly recover and impacted eelgrass would be replanted over the pipeline in the areas from which it was removed.

For reasons of cost and inconsistencies with existing federal permits, the proposed project has not incorporated this measure into the development plans. As an alternative to this proactive mitigation, the project proposes post-development monitoring of the discharge points following completion of the drainage facilities. The outfalls would be monitored for a period of 5 years to determine the extent of any adverse effects. If impacts were identified, action would be taken to rectify or mitigate these problems. Following the

of disturbance caused by such chemicals is considerable, and the amounts produced under the given conditions as well as the long periods of time required to de-toxify these materials warrant thorough consideration.

The fact that these chemicals are not easily broken down, and further, that they are not water soluble, allows these products to persist in a more-or-less original state as they are transported by freshwater runoff to the marsh. Once in the marsh there can be a very wide range of effects of these pollutants upon resident organisms. These effects range from behavioral responses such as emigration from, lack of immigration to, or modified utilization of polluted areas; to reduction of growth rates and reproductive success including decreased fecundity, increased size or age of sexual maturity; increased susceptibility to parasitism or disease; and in the extreme case, death of respective organisms, species, and/or replacement of representative dominant species by more pollutant resistant species. Hydrocarbons have been identified as effective inhibitors of chemoreceptors which may further inhibit organisms' abilities to locate food, detect predators, or identify potential mates.

The use of fertilizers and pesticides by local residents also holds potential for altering the diversity and abundance of the organisms occupying the marsh. Fertilizers supply one or more nutrient sources which are normally limiting to maximum plant growth; typically nitrogen (in the form of nitrate, nitrite, ammonia, or urea), phosphorus (in the form of phosphate), sulfate, "B" vitamins, and trace metals. The consequences of these excessive nutrients entering the marsh will be an accelerated eutrophication of the system. Under minimal input conditions, there would be a promotion of the growth of plants in excess of that which would be possible under the normally nitrogen-limited conditions prevailing within the marshlands (Zedler, 1986). In an extreme case, at night, during the so-called 'dark phase' of the photosynthetic cycle, oxygen levels in the water can be so reduced that a massive die-off of the fish and invertebrates results. The large amounts of decaying organisms also promote excessive bacteria growth which further imbalances the marsh habitat.

Another possible consequence of the influx of excessive nutrients into the marsh is that it may allow plant species, which would normally be unable to compete with the normal environmental dominants, the ability to out-compete and displace resident species. A change in the flora would result in the alteration of the representative fauna inhabiting the marsh. Many organisms are intricately tied to a particular plant for food, shelter, or to fulfill requirements for reproduction. Loss of a particular plant or suite of plants may therefore foster the elimination of the expected fauna of an undisturbed marsh system.

Influx of pesticides into the marsh through freshwater runoff can also have devastating effects on the marsh community. The effects can be manifested in the outright death of organisms or in sublethal effects such as loss of reproductive success. While the historic examples of DDT on avian reproduction are unlikely to be repeated, they remain classic examples of the potential hazards which must be investigated in order to prevent future potential disturbances. This may be difficult because often there is not adequate testing to ensure short term exposure levels are safe to potentially affected species, and data concerning the effects of long term exposure or bioaccumulation of contaminants in predator species are even more lacking.

## **Contaminant Source Control**

- Development and implementation of a project-level landscape chemical management plan which would require:
  - a. the minimal and controlled application of fertilizers, herbicides, and pesticides within the project area
  - b. landscape runoff control measures
  - c. use of state-certified applicators only
  - d. use of short-lived EPA-registered approved chemicals for use near wetland areas
- Inclusion of native low-water use vegetation buffers along project boundaries in locations with sheet flow drainage off of the site
- Development and implementation of a project-level water quality monitoring program which would include:
  - a. a specification of the water quality parameters to be examined
  - b. an identification of the frequency of measurement and locations of sampling sites
  - c. identification of equipment to be used and reporting procedures to be followed
  - d. a commitment to take appropriate corrective measures should a problem be identified
- Development and implementation of a monitoring program for mudflat areas located below storm drain discharge points which would include:
  - a. requirements for approval of the ACOE, USFWS, NMFS, and CDFG
  - b. monitoring for water/sediment contaminants
  - c. monitoring of sediment grain size characteristics
  - d. monitoring of erosion activities
  - e. identification of corrective measures should impacts occur

The incorporation of these measures *do* could provide adequate assurance at a plan level that water quality impacts will be mitigated to a level of less than significant. During the project level environmental review, final plan documents responding to the site specific layouts will need to be examined. For ease of use and reference, these various management plans (facilities maintenance, landscape chemical management, water quality monitoring, and mudflat monitoring) should be incorporated into an overall Chula Vista Bayfront, Environmental Management Plan document.

### Sediment Accretion and Erosion

As indicated, the proposed project will greatly alter the existing drainage patterns and surface flow volumes within the Midbayfront. These changes could potentially lead to increased erosion within the uplands and accretion of sediments within the lowland basins, wetlands and discharge areas of San Diego Bay.

While sedimentation and erosion are natural occurrences and even requirements for the development of coastal salt marsh systems, the rate of sedimentation experienced by coastal

of mitigating these impacts to a less than significant level are available and the methods outlined in the prior section would adequately address this issue as well. Again, it would be recommended that storm drains be extended to deeper water as opposed to habitat replacement in other areas, however, either mitigation method is adequate to address the concerns.

### Construction Impacts

The construction phase of the proposed project has the potential for the greatest impacts to the natural systems, is likely to lead to the most rapid changes in sediment transport, and has the highest potential for effecting a change in the local water quality as it relates to biological resources. Such changes have already been discussed and include increased potential for changes in the erosion and accretion patterns, potential for elevated turbidity levels in the bay, and potential for releases of toxins from the construction area into the surrounding wetlands. ~~The potential construction associated impacts are considered significant and mitigable.~~

Mitigation of construction impacts is possible through implementation of effective runoff control measures. Several of these measures have been incorporated into the LCPR (I.I. Utilities and Area Wide Grading, pg. II-80-87) or in standards recently provided by the applicant. These measures include the following requirements:

- provision of flagging and temporary fencing where appropriate to control access to sensitive areas and buffers
- establishment of temporary catchment basins, sediment traps and erosion control measures in all work areas
- installation and maintenance of silt fences where appropriate at the construction site
- use of energy dissipating measures at the outlets of any temporary storm drains
- stabilization of all denuded soil with protective mulch and seeded annual grasses
- use of filters to clarify water leaving detention basins prior to returning to natural wetland areas or the waters of San Diego Bay
- prohibition of grading or construction activities within 200 feet of any wetland or mudflat area from March 15 through August 31, unless approved by the USFWS and CDFG

In addition to these measures it is important that construction dewatering effluent be directed into a desilting basin with a filtered standpipe drain or a filter-fabric and gravel leach system so that clear water is released from the basin. As an alternative, construction dewatering effluent should be pumped across the mudflat into the deeper waters of the boat

~~and rails, etc. Also included in the studies are raptorial birds (hawks, eagles, and owls) including corvids.~~

To evaluate these concerns, an avian flight study was conducted at the Chula Vista bayfront (Appendix C, Section II). The study sought to identify the patterns of flight activity of water-associated birds including gulls, terns, wading birds, marshbirds, large and small shorebirds, and waterfowl. Also examined in the study were raptorial birds (hawks, eagles, owls) including corvids. The goals of this study were: (1) to identify current flight activities and patterns within the proposed Midbayfront development area; (2) to identify the level of bird flight interruption which might be expected to occur as a result of building intrusion into various flight patterns; and (3) to evaluate the effects of these interruptions with respect to potential bird collisions and loss of habitat utilization.

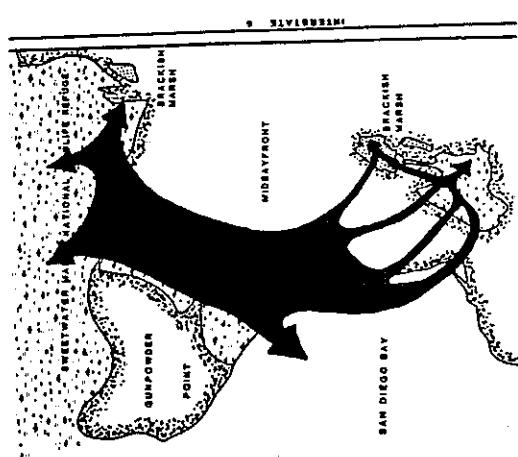
The first goal of the study was achieved by monitoring bird flights over a seven month period and documenting flight activities, patterns and elevations for various species and groups. Information was used to determine both a numerical distribution of flight activities for various bird groups and to prepare a graphic representation of flight patterns of birds over the Midbayfront study area (Figure 3-VI-A).

The avian studies indicated that waterbird flights in the Midbayfront were found to be generally restricted to low altitude movements over wetland habitats. While variations between species and behavioral/morphological groups occurred, such patterns of movement were strongly maintained between ~~highly conserved~~ across groups. The most notable exception to the flight activity patterns within the groups monitored occurred in raptors whose movements were predominantly associated with foraging activities over the open fields, and gulls which made high elevation diurnal movements to and from the inland reservoirs, landfills, and agricultural areas, a pattern repeated throughout the southbay region.

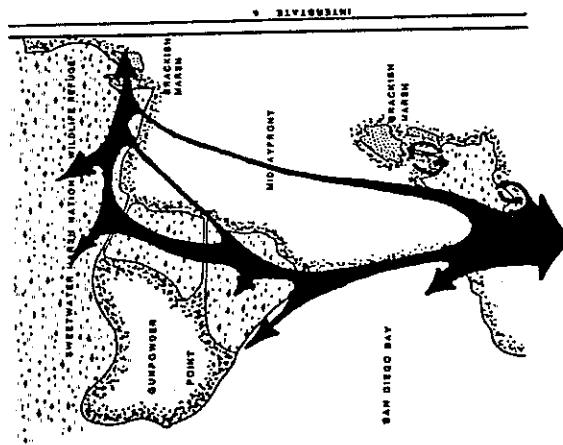
~~With the exception of the activities of raptors and broadly defined gull flight corridors, building height and placement were not found to be issues with respect to avian flight activities or the disruption of flight corridors.~~

By overlaying the flight data on the project plan and alternative designs it was possible to calculate an expected incidence of co-occurrence of buildings and birds within any given 3.7 acre square at various elevation ranges (referred to as a "cell" in these discussions). In making these calculations, the most conservative approach was taken to identifying these conflicting areas (i.e., when any portion of a grid and elevation range would be occupied by a building, the entire cell was considered to be impacted by the building). This approach was necessary since a calculation of impacts on the basis of proportion of grid or elevation range occupancy may have underestimated true co-occurrence since flight activities were not randomly distributed within any given cell. This conservative approach, therefore, often resulted in a substantial over-estimation of the true incidences of potential co-occurrence. Furthermore, it was possible to determine the theoretical number of collisions that would occur without considering the physical senses or navigational abilities of the birds; i.e., it was assumed that every bird flying on a collision course with a building would stay on course and collide with the building. However, even under these extremely conservative assumptions,

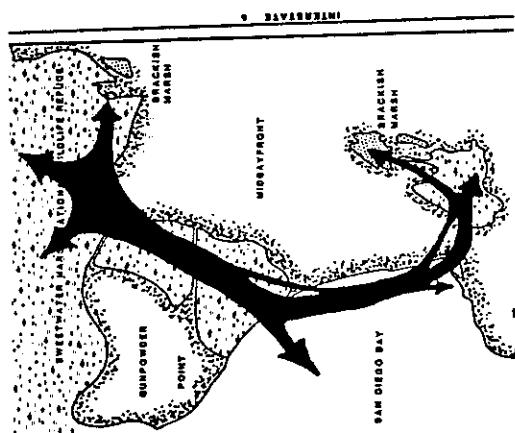
# # PATH - M B C S P R U O F



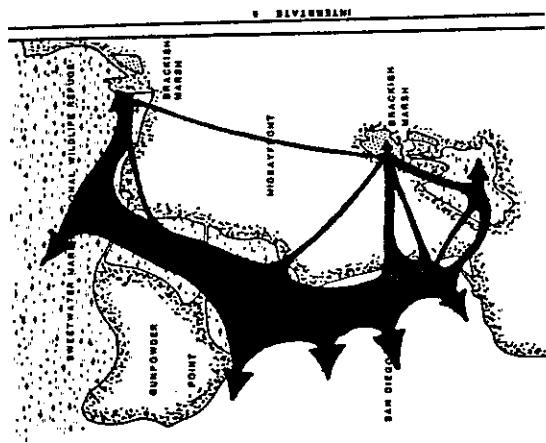
Wading/Marsh Birds



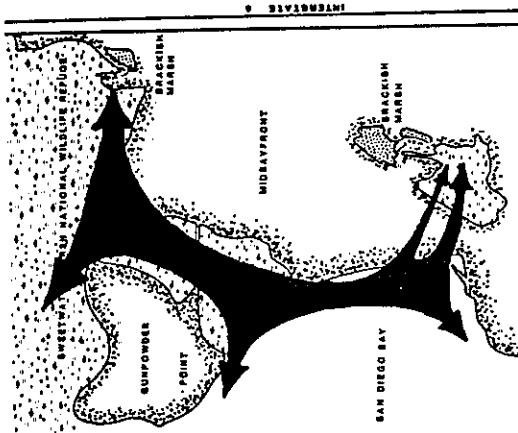
Gulls (Scavengers)



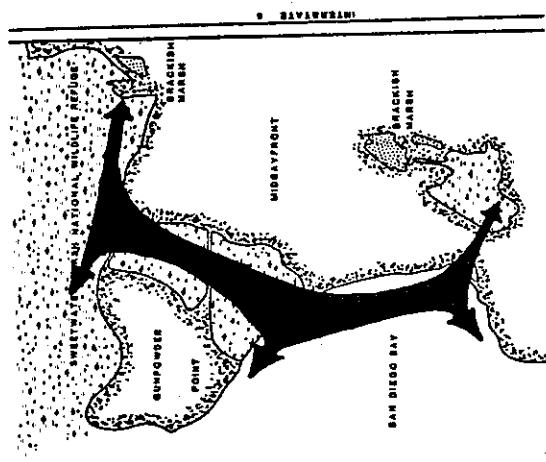
Large Shorebirds



Waterfowl



Small Shorebirds



Aerial Fish Foragers

## AVIAN FLIGHT PATTERNS IN THE MIDBAYFRONT

Figure 3-VI-A

impacts to all waterbird flights, when evaluated relative to the total flight activities within the study area, rarely exceeded 5 percent of all flights.

To factor more realistic features into analyses of bird behavior, an extensive literature review was undertaken to determine how birds truly acted around various structures. The literature review examined all relevant data, however, waterbird and raptor activities were specifically targeted. From studies which empirically examined avian collision rates with existing structures, it was determined that in a worst-case situation where buildings of the proposed development were assumed to have the same likelihood to result in collisions as transmission lines, only 0.06 to 0.002 percent of the 0.5-6.7 percent of the "impacted" avian flights in the study area would be expected to result in collisions (excluding raptors and gulls) (Meyer, 1978; Willdan Assoc., 1981, 1982 as cited in Section II of Appendix C of the DEIR). Based on these analyses, only 1 to 400 flights in every 10 million would result in avian mortality as a result of collisions with structures in the Midbayfront. This rate of mortality was calculated under assumptions that entire grid cells would be impacted by buildings, even though buildings occupy only a minor portion of the cell, and that prominent buildings would have the same collision probability as transmission lines.

Waterbirds observed during the study period showed a strong proclivity for flights along wetland and wetland fringes. The vast majority of the flight activities observed in upland areas was a result of birds cutting across narrow peninsulas between marsh areas. Some bird species and groups were more likely to make these overland flights than others, however, it appears that when such flights over uplands are made they are a matter of convenience rather than necessity. The exception to this consisted of flights made to upland fields by Killdeer, raptors and the broadly defined flights of gulls to inland waters, landfills, and fields.

In the case of raptors, building placement is considered secondary to the loss of foraging habitat usage which would result from development of the site and general human encroachment. This point is discussed in a later section of this document. Because of the overriding issue of habitat unsuitability for raptors under developed site conditions, the impacts to raptor flight activities is not considered to be significant.

In the case of gulls, flight patterns appear to be regional in nature and not specific to any set corridors. Further, numerous studies have cited the structure avoidance behavior of gulls wherein they tend to fly around or rise over impediments. Further, collisions with structures by this group have been reported to be extremely low. For this reason, impacts to gulls are considered to be insignificant.

Based on the results of this investigation, the effect of buildings on avian flight activities would be the minor adverse modification of incidental flights over upland areas rather than a modification of primary flight patterns. In as much as flights along these courses are not the rule but the exception, and are generally goal-oriented movements between foraging or loafing areas rather than activities dependent upon the habitats traversed, no impacts to waterbird use areas are expected to be associated with the limited disruption of flight patterns. Such effects are considered to be cumulatively adverse but less than significant.

Although the present agricultural use of the development site is not a direct benefit to most of the water-associated birds in the marsh, the restricted access to the area and the presence of many weedy plant species along the periphery of the flat, open fields, indirectly benefits the birds by allowing unrestricted movement between foraging areas and providing a buffer to human associated activities. It also provides many species such as the Belding's Savannah Sparrow with forage (seeds) and cover.

Development of the area will reduce the shoreline buffer zone and make the wildlife area more prone to the long-term impacts of successional habitat dynamics. Large stands of habitat can withstand minor perturbations and still sustain a population which is large, healthy, and diverse enough to ensure the long-term survival of the species in the area. Deleterious edge effects and fragmentation caused by roads and residential development in such areas can make some species much more vulnerable to local extinction (Soulé & Wilcox, 1980).

The presence of a large number of people in the area could eventually lead to site degradation by humans and their associated pets, primarily domestic dogs and cats, which inevitably find their way over, through, and under even well-tended and mended fences. In similar habitats on Delaware Bay researchers found that only 30 percent of the shorebirds present remained undisturbed on a beach when human activity was allowed. In areas where activity was persistent, birds were found to be less impacted than in areas where activities were inconsistent or erratic (Burger, 1986). Dogs not only flush birds along shorelines, but are also prone to swimming or wading to otherwise isolated nesting areas and can destroy nests. Secretive rails are very sensitive to human presence and, if not killed, will leave a site if disturbed regularly. Such is likely to have been the case at the "F" & "G" Street Marsh (Jorgensen, pers. comm. 1988). In the bayfront, it is not uncommon to see persons with multiple dogs turn their animals loose to chase birds. Signs are only a partial solution since dog owners have been observed on multiple occasions to set their dogs over the posted, least tern colony fence on the "D" Street Fill, while active, and climb over to jog the periphery of the site. Feral dogs and apparently abandoned animals are also quite common in the bayfront area.

Domestic cats have been found to be major predators in some suburban residential areas. Clearly, this is one adverse effect of residential development that could have a significant impact on the birds of the Sweetwater Marsh complex; of particular concern would be small shorebirds, the Belding's Savannah Sparrow, and juveniles of all species.

Residential or recreational development in the area will increase the likelihood of illegal entry, vandalism and habitat degradation of the environment by adults as well as children. Illegal off-road vehicle use of the area is likely to decline when the site is developed; however, approaches from the waterfront are likely to increase dramatically with development. Such waterfront approaches by boats and jet skis would probably lead to harassment avoidance behavior on the part of many shorebirds as well as boat propeller impacts to the mudflat and eelgrass habitats found in the adjacent shallow bay waters.

The effects of well-meaning and industrious children can be quite harmful. With much more playtime on their hands than there is usually time available by security personnel to

- Identification of implementation and enforcement staffing needs, funding mechanisms and contingencies. The plan must include a commitment to the program for the life of the project.
- Development and execution of a joint-powers agreement between the US Fish and Wildlife Service, San Diego Unified Port District, City of Chula Vista, City of National City, and the California Department of Fish and Game. This agreement would specify when, where, how, and under what circumstances enforcement and predator management actions may be taken in various jurisdictions and which entity would be responsible for various actions.

The various concept plans included in the LCPR and appendix have proposed approval requirements for final project plans prior to issuance of building permits. These would, however, have to be prepared and included in a project-level Environmental Management Plan document. The project-level human and domestic animal management plans could be readily incorporated into the predator management plan (discussed elsewhere in this document).

With the implementation of these measures, the significant impacts associated with increased human and pet presence could be mitigable to a level less than significant at the project level. Project-level evaluation of specific detail would be required to confirm adequacy in the development of plans based on these guidelines.

~~The potential impacts of increased human and pet presence are considered significant and adverse. Mitigation of these impacts is possible; however, it will require a combined effort on the part of several distinct entities in order to achieve success. The unique presence of four separate governmental entities (Chula Vista, National City, San Diego Unified Port District, and the U.S. Fish and Wildlife Service) within the immediate area, poses serious regulatory and jurisdictional problems which are expected to require joint powers agreements in order to successfully implement mitigation measures. Additionally, this impact, like several others, will be continuous in nature. For this reason, mitigation will have to be ongoing and monitored carefully to determine program effectiveness and any changes which may be required to meet the desired mitigation goals.~~

#### Alteration of Predator/Competition/Prey Regimes

Residential or recreational areas are likely to have a greater promotional effect on the levels of domestic animals than nonresidential development; however, even nonresidential development could have major impacts on the area. A tourist complex which caters to a large number of people will generate a substantial amount of food and/or trash and will attract opportunistic scavengers, such as Common Ravens, a variety of gulls, European Starling, Black Rats, and Virginia Opossum which are known as aggressive predators and/or competitors in the coastal environments. Their increased presence would adversely impact the more sensitive species in the area.

The effects of non-native plants used in landscaping designs may not only spread and out-compete existing wetland plants as previously discussed, but they may also serve to attract

### 3.4 CONVERSION OF AGRICULTURAL LANDS

#### Existing Conditions

The Chula Vista Midbayfront project area contains a mixture of manufacturing, abandoned agricultural and undeveloped areas. The southwest corner of the project area contains a manufacturing business on approximately 3.7 acres. The northeast corner of the project area contains abandoned and partially torn-down greenhouses and agriculture-related buildings on approximately 11 acres; the remaining agricultural structures are slated for demolition. Previous agricultural production on the site included seedless cucumbers, tomatoes, lettuce, cabbage and strawberries. It appears from aerial photos that approximately one-third to one-half of the site was at one time used for agricultural production.

#### **Climate**

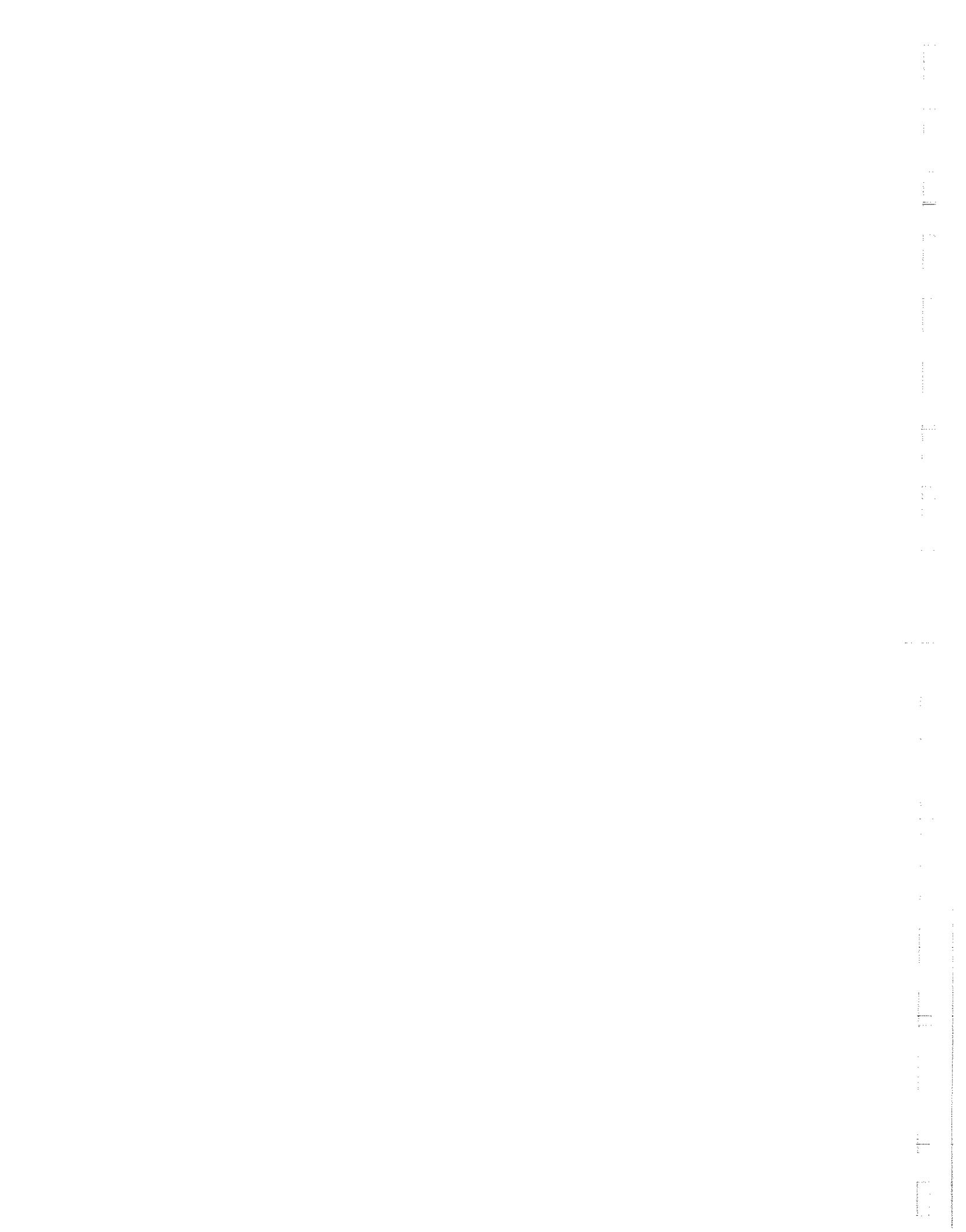
The Midbayfront project area lies within the boundaries of the coastal area climate. This climate is considered favorable to crop production because it is consistently mild. The mean annual precipitation rate is between 10 and 12 inches, and the mean annual air temperature is 60° to 62° F. The frost-free season is 300 to 350 days a year.

#### **Soils**

The following soils information is based upon the U.S. Department of Agriculture Soil Conservation Service Soil Survey. The soils types found in the Midbayfront area are shown on Table 3-2, as well as the capacity classification and Storie ratings for each soil. Their rated suitability for the five principal crops grown in San Diego County is also provided. Though four of the project soil types have not been analyzed, one of the soils is rated fair for truck crops and flowers and good for tomato cultivation.

The capability class and Storie ratings express the relative suitability of the soils for agricultural purposes. The Storie Index is based on soil characteristics only, and numerically expresses the relative degree of suitability of a soil for general intensive agriculture. Capability ratings encompass such factors as crop suitability, potential for soil damage, soil conservation and crop management. Capability classes are designated by Roman numerals I through VIII, which indicate progressively greater limitations and narrower choices for practical soil use (i.e., soils with a Class I rating would have the fewest limitations, and soils with a Class VIII rating would be restricted to such uses as recreation, wildlife or water supply purposes).

All land which is rated Class I or II in the Capability classification and rated 80 through 100 in the Storie Index rating is defined as "prime agricultural land" under government code Section 512.01 of the California Land Conservation Act of 1965 (Williamson Act). Conversely, land having capability ratings of Class VII or VIII and Storie Index ratings of 5 or 6 are not considered to be suitable for crop production. According to this definition, Huerhuero loam is the only one of the four soil types found in the project area considered suitable for crop production. The others, Huerhuero urban, man-made fill and Tidal Flats,



**Table 3-2**

**Analysis of Soils in the  
Midbayfront Area**

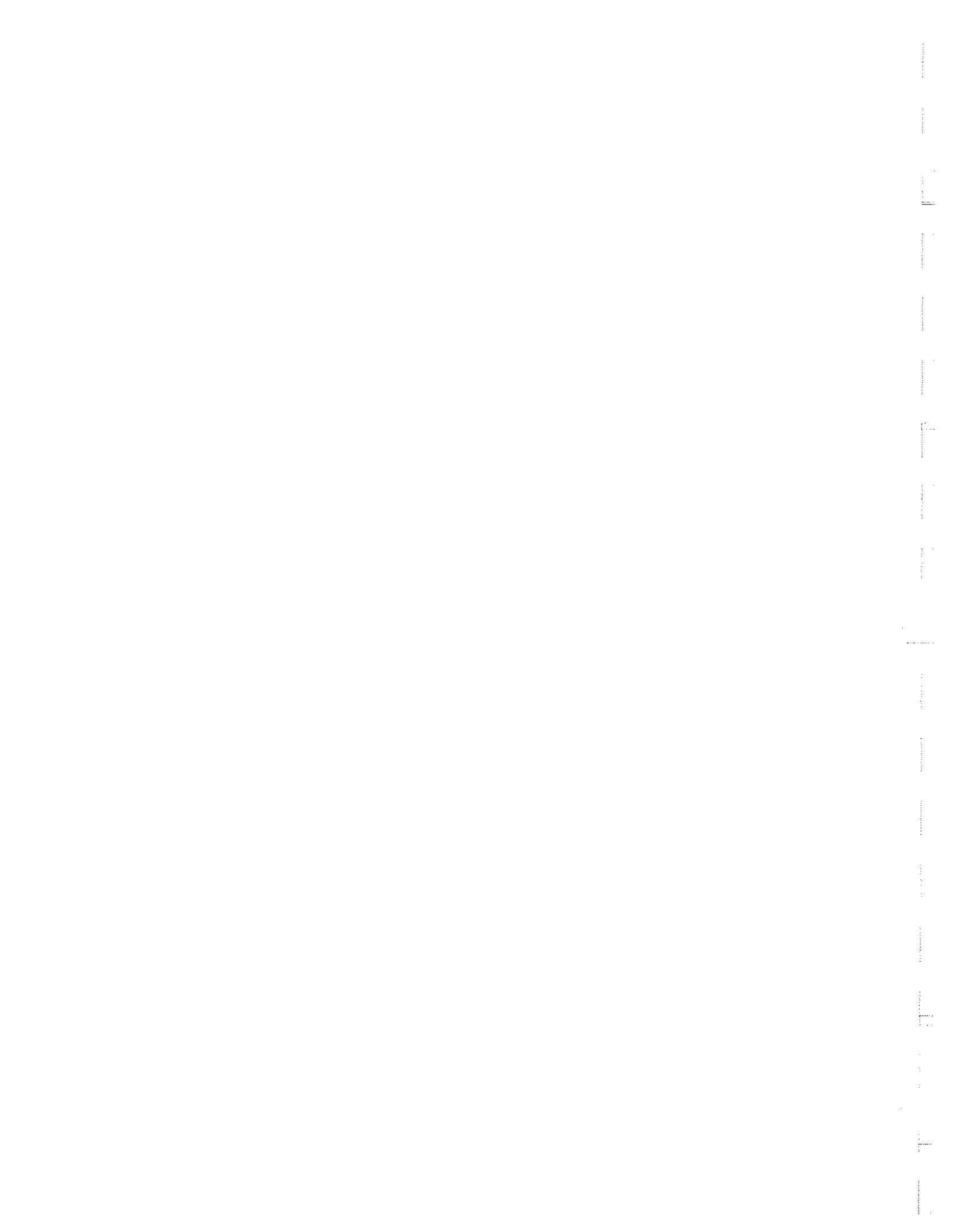
| Soil Name       | Map Symbol | Percent Scope | Storie Class | Index | Crop Stability If Irrigated |        |             |          |         |
|-----------------|------------|---------------|--------------|-------|-----------------------------|--------|-------------|----------|---------|
|                 |            |               |              |       | Avocados                    | Citrus | Truck Crops | Tomatoes | Flowers |
| Huerhuero loam  | HrC        | 2-9           | IIIe-3       | 41    | N                           | N      | F           | G        | F       |
| Huerhuero urban | HuC        | 2-9           | ---          | ---   | *                           | *      | *           | *        | *       |
| Made land       | Md         | Flat          | VIIIe-1      | ---   | *                           | *      | *           | *        | *       |
| Tidal flats     | Tf         | Flat          | VIIIw-6      | <10   | *                           | *      | *           | *        | *       |

G - Good

F - Fair

N - Not rated

\* - Not analyzed



are considered unsuitable for any type of crop production. The project area does not contain any soil considered "prime agricultural land."

Because a wide variety of crops can be grown easily in non-prime soils with proper climate and water, the agricultural potential of the Midbayfront project soils is more accurately reflected by the soil survey ratings because they consider the types of production that could take place in the area. This system rates soils as "good" or "fair" for five crops; avocados, citrus, truck crops, tomatoes and flowers. Those soils which do not meet the "fair" criteria are "not rated" (see Table 3-2).

### **Important Farmlands**

The State of California Department of Conservation prepares a map which locates and defines farmland within the County. Farmland is classified between Prime, the best possible soil for agricultural crop production, and Grazing Land, on which the soil is best suited to the grazing of livestock. Intermediate ratings include Farmlands of Statewide Importance, which are good for the production of agricultural crops; Unique, lesser quality soils used for agricultural cash crops; and Farmlands of Local Importance, non-irrigated soil units that have significant economic importance to the County. The most recent map (1986) indicates five relatively small areas of prime agricultural importance, none of which is located in or near the project area. The closest are located in the Montgomery Planning Area, near the South Bay and approximately 2.3 miles from the Midbayfront.

### **Water Availability**

The Sweetwater Authority (SWA) provides water service for the bayfront area. The production of coastal dependant crops requires large amounts of water. These crops use as much water per acre as does residential development at five or six units per acre (Buckner, 1980). The amount of project area land historically dedicated to agriculture is relatively small; however, if agriculture were to be revived at the site, the SWA would not be expected to have a problem supplying water.

### **Impacts**

The proposed LCPR No. 8 and the associated developer's proposal do not include agricultural uses. This is consistent with the existing certified LCP and the City's General Plan (Update). Past agricultural use has been relatively light in the area, and currently does not exist. It would be economically infeasible for the land owner to retain agricultural uses due to rising water costs in this area and the limited revenues of agricultural production. Thus, the proposed Midbayfront project, as well as all alternatives except the No Project Alternative (Alternative 1), would allow the conversion of land suitable for agricultural use from agricultural to urban uses. This conversion does not represent a significant impact in terms of the loss of potential production of coastal-dependant crops. It does, however, represent an incremental loss of agricultural land to development within San Diego County, which contributes to a regionally significant loss of agricultural lands to urban development.

### **Mitigation**

No mitigation measures are required as no significant impacts at the project level were identified.

### **Analysis of Significance**

The loss of approximately 45 to 65 acres of potential agricultural land to urban uses is not considered significant at the project level. The project loss of agricultural land represents an incremental contribution to a regionally significant loss of agricultural land to development. This impact would be the same for all alternatives (2, 3, 4, 5, 7, 8 and 9) except the No Project Alternative (Alternative 1).

### **3.5 AIR QUALITY**

#### Existing Conditions

##### **Meteorology/Climate**

The climate of Chula Vista, as with all of California, is largely controlled by the strength and position of the semi-permanent high pressure center over the Pacific Ocean. The high pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, clean daytime onshore breezes and little temperature change throughout the year. Limited rainfall occurs in winter when the high center is weakest and farthest south, and when the fringes of mid-latitude storms occasionally move through the area. Summers are often completely dry, and an average of 10 inches of rain fall each year from November to early April. Unfortunately, the same atmospheric conditions that create a desirable living climate combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted to San Diego County. The onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego, and the sinking air within the offshore high pressure system forms a massive temperature inversion that traps all air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, cause a number of reactive pollutants to undergo photochemical reactions and form smog that degrades visibility and irritates tear ducts and nasal membranes. Because coastal areas are well ventilated by fresh breezes during the daytime, they generally do not experience the same air pollution problems found in some areas east of San Diego. Unhealthful air quality within the San Diego Air Basin's coastal communities such as Chula Vista may occur at times in summer during limited localized stagnation, but occurs mainly in conjunction with the occasional intrusion of polluted air from the Los Angeles Basin into the county, especially to North County. Localized elevated pollution levels may also occur in winter during calm, stable conditions near freeways, shopping centers or other major traffic sources, but such clean air violations are highly localized in space and time. Except for this occasional interbasin transport and possible localized air pollution "hot spots," coastal community air quality is generally quite good.

Local meteorological conditions typically conform well to the regional pattern of strong onshore winds by day, especially in summer, and weak offshore winds at night, especially in winter. These local wind patterns are driven by the temperature difference between the normally cool ocean and the warm interior and steered by any local topography. In summer, moderate breezes of 8-12 mph blow onshore by day, and may continue all night as a light onshore breeze as the land remains warmer than the ocean. In winter, the onshore flow is weaker, and reverses in the evening as the land becomes cooler than the ocean. While daytime winds are mainly off the ocean from the W-NW, winds do, at times, shift into the WSW or even SW where air pollution emissions from Mexico are carried across the border. Given the scope of development and the lack of pollution controls across the border, international transport is an important air pollution concern. Such cross-border emissions do not generally affect the Chula Vista area because it takes several hours of transport for such pollutants to react and become photochemical smog, but, like the pollution recirculation from the Los Angeles Basin, it means that no matter what pollution controls

are implemented within the county, there may still be smog from other sources beyond the county's control.

Both the onshore flow of marine air and the nocturnal drainage winds are accompanied by two characteristic temperature inversion conditions that further control the rate of air pollution dispersal throughout the air basin. The daytime cool onshore flow is capped by a deep layer of warm, sinking air. Along the coastline, the marine air layer beneath the inversion cap is deep enough to accommodate any locally generated emissions. However, as the layer moves inland, pollution sources (especially automobiles) add pollutants from below without any dilution from above. When this progressively polluted layer approaches foothill communities east of coastal developments, it becomes shallower and exposes residents in those areas to the reacted byproducts of coastal area sources. The slow drainage or stagnation of cool air at night creates localized cold "pools" while the air above the surface remains warm. Such radiation inversions occur throughout the San Diego area, but are strongest within low, channelized river valleys. They may trap vehicular exhaust pollutants such as carbon monoxide (CO) near their source until these inversions are destroyed by surface warming the next morning. Any such CO "hot spots" are highly localized in space and time (if they occur at all), but occasionally stagnant dispersion conditions are certainly an important air quality concern relative to continued intensive development of the Chula Vista area. The intensity of development east of Chula Vista is sufficiently small such that non-local background pollution levels during nocturnal stagnation periods are relatively low. The local airshed, therefore, has considerable excess dispersive capacity that limits the potential for any localized air pollution "hot spots."

## Air Quality

Ambient Air Quality Standards (AAQS): In order to assess the air quality impact of any proposed development, that impact, together with baseline air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect, i.e., sensitive receptors, those people most susceptible to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness and persons engaged in strenuous work or exercise. Healthy adults can tolerate periodic exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic ozone exposure to levels at or even below the hourly standard can have adverse long-term pulmonary health effects.

The Clean Air Act Amendments of 1970 established national AAQS with states retaining the option to adopt more stringent standards or to include other pollution species ~~agents~~. Because California already had standards in existence before federal AAQS were established, and because of unique meteorological problems in the state, there is considerable diversity between state and federal standards currently in effect in California as shown in Table 3-3.

Baseline Air Quality: There are daily routine measurements of air quality distributions made in Chula Vista by the San Diego County Air Pollution Control District (APCD), the agency responsible for air quality planning, monitoring and enforcement in the San Diego Air Basin (SDAB). Table 3-4 summarizes the last five complete years (final 1989 data have

**Table 3-3**  
**Ambient Air Quality Standards**

| Pollutant                                          | Averaging Time         | California Standards                                                                                                        |                                                                   | National Standards                    |                                     |                                              |
|----------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------|-------------------------------------|----------------------------------------------|
|                                                    |                        | Concentration                                                                                                               | Method                                                            | Primary                               | Secondary                           | Method                                       |
| Ozone                                              | 1 Hour                 | 0.09 ppm<br>(180 ug/m <sup>3</sup> )                                                                                        | Ultraviolet Photometry                                            | 0.12 ppm<br>(235 ug/m <sup>3</sup> )  | Same as Primary Std.                | Ethylene Chemiluminescence                   |
| Carbon Monoxide                                    | 8 Hour                 | 9.0 ppm<br>(10 mg/m <sup>3</sup> )                                                                                          | Non-dispersive Infrared Spectroscopy (NDIR)                       | 9.0 ppm<br>(10 mg/m <sup>3</sup> )    | Same as Primary Stds.               | Non-dispersive Infrared Spectroscopy (NDIR)  |
|                                                    | 1 Hour                 | 20 ppm<br>(23 mg/m <sup>3</sup> )                                                                                           |                                                                   | 35 ppm<br>(40 mg/m <sup>3</sup> )     |                                     |                                              |
| Nitrogen Dioxide                                   | Annual Average         | -                                                                                                                           | Gas Phase Chemiluminescence                                       | 0.053 ppm<br>(100 ug/m <sup>3</sup> ) | Same as Primary Std.                | Gas Phase Chemiluminescence                  |
|                                                    | 1 Hour                 | 0.25 ppm<br>(470 ug/m <sup>3</sup> )                                                                                        |                                                                   | -                                     |                                     |                                              |
| Sulfur Dioxide                                     | Annual Average         | -                                                                                                                           | Ultraviolet Fluorescence                                          | 80 ug/m <sup>3</sup><br>(0.03 ppm)    | -                                   | Pararosoaniline                              |
|                                                    | 24 Hour                | 0.05 ppm<br>(131 ug/m <sup>3</sup> )                                                                                        |                                                                   | 365 ug/m <sup>3</sup><br>(0.14 ppm)   | -                                   |                                              |
|                                                    | 3 Hour                 | -                                                                                                                           |                                                                   | -                                     | 1300 ug/m <sup>3</sup><br>(0.5 ppm) |                                              |
|                                                    | 1 Hour                 | 0.25 ppm<br>(655 ug/m <sup>3</sup> )                                                                                        |                                                                   | -                                     | -                                   |                                              |
| Suspended Particulate Matter (PM <sub>10</sub> )   | Annual Geometric Mean  | 30 ug/m <sup>3</sup>                                                                                                        | Size Selective Inlet High Volume Sampler and Gravimetric Analysis | -                                     | -                                   | -                                            |
|                                                    | 24 Hour                | 50 ug/m <sup>3</sup>                                                                                                        |                                                                   | 150 ug/m <sup>3</sup>                 | Same as Primary Stds.               | Inertial Separation and Gravimetric Analysis |
|                                                    | Annual Arithmetic Mean | -                                                                                                                           |                                                                   | 50 ug/m <sup>3</sup>                  |                                     |                                              |
| Sulfates                                           | 24 Hour                | 25 ug/m <sup>3</sup>                                                                                                        | Turbidometric Barium Sulfate                                      | -                                     | -                                   | -                                            |
| Lead                                               | 30 Day Average         | 1.5 ug/m <sup>3</sup>                                                                                                       | Atomic Absorption                                                 | -                                     | -                                   | Atomic Absorption                            |
|                                                    | Calendar Quarter       | -                                                                                                                           |                                                                   | 1.5 ug/m <sup>3</sup>                 | Same as Primary Std.                |                                              |
| Hydrogen Sulfide                                   | 1 Hour                 | 0.03 ppm<br>(42 ug/m <sup>3</sup> )                                                                                         | Cadmium Hydroxide STReactan                                       | -                                     | -                                   | -                                            |
| Vinyl Chloride (chloroethene)                      | 24 Hour                | 0.010 ppm<br>(26 ug/m <sup>3</sup> )                                                                                        | Tedlar Bag Collection, Gas Chromatography                         | -                                     | -                                   | -                                            |
| Visibility Reducing Particles                      | 1 Observation          | In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%  |                                                                   | -                                     | -                                   | -                                            |
| <b>Applicable Only in the Lake Tahoe Air Basin</b> |                        |                                                                                                                             |                                                                   |                                       |                                     |                                              |
| Carbon Monoxide                                    | 8 Hour                 | 6 ppm<br>(7 mg/m <sup>3</sup> )                                                                                             | NDIR                                                              | -                                     | -                                   | -                                            |
| Visibility Reducing Particles                      | 1 Observation          | In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%. |                                                                   | -                                     | -                                   | -                                            |

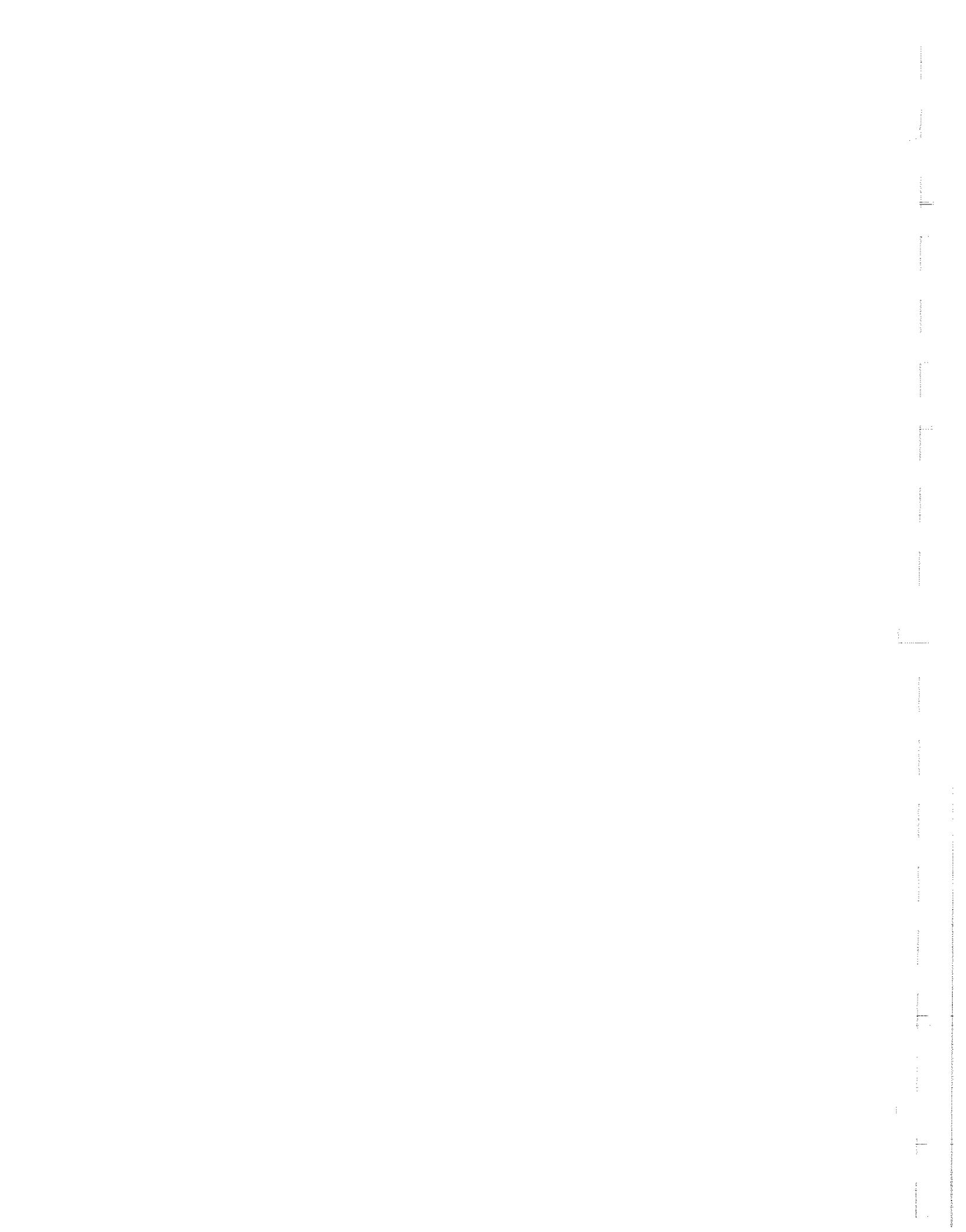


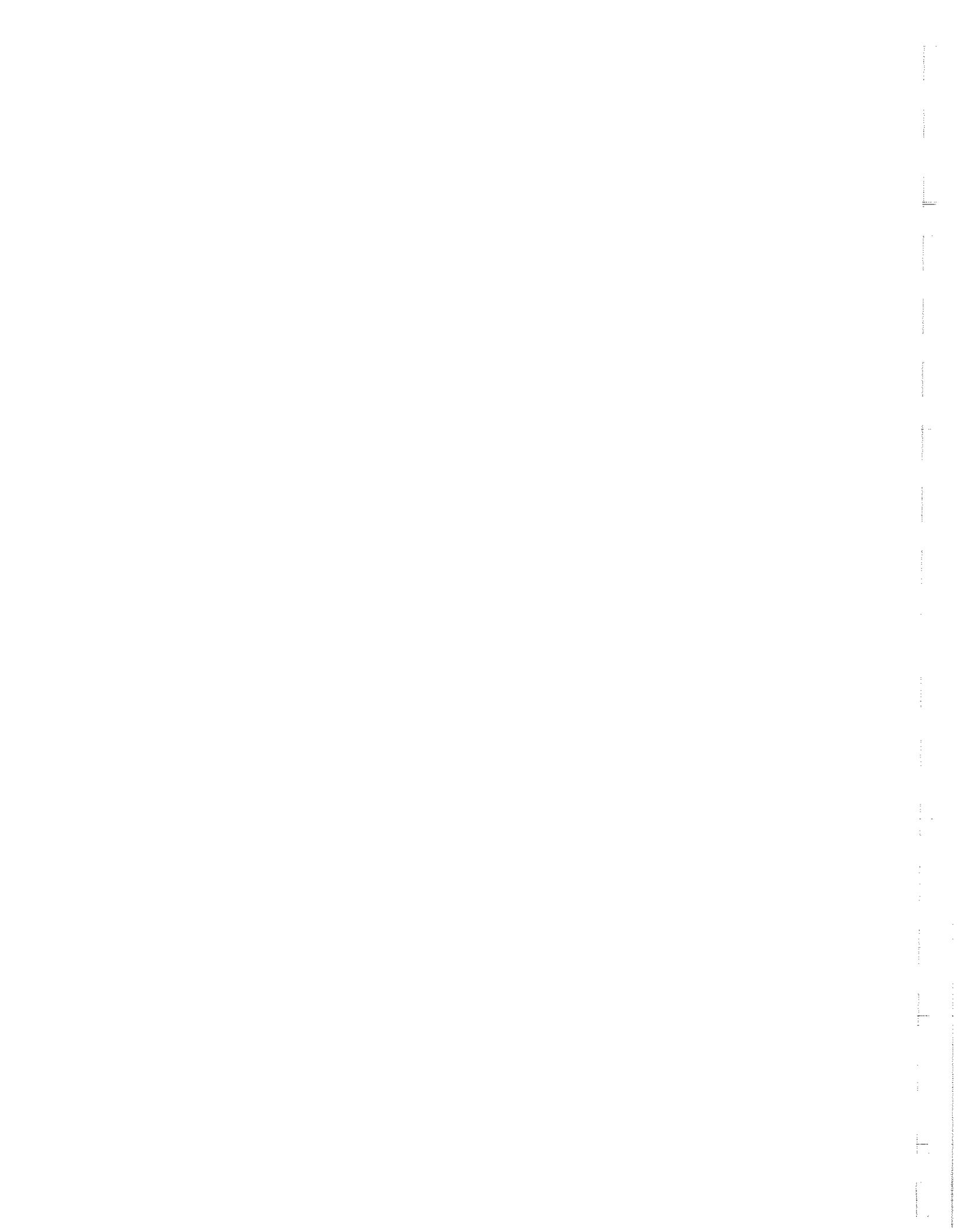
TABLE 3-4

**Chula Vista Area Air Quality Monitoring Summary — 1984-1988**  
**(Days Standards Were Exceeded and Maxima for Periods Indicated)**

| Pollutant/Standard                      | 1984  | 1985  | 1986  | 1987  | 1988  |
|-----------------------------------------|-------|-------|-------|-------|-------|
| <b>Ozone:</b>                           |       |       |       |       |       |
| 1-Hour > 0.09 ppm                       | 18    | 28    | 20    | 15    | 17    |
| 1-Hour > 0.12 ppm                       | 4     | 4     | 2     | 2     | 4     |
| 1-Hour > 0.20 ppm                       | 0     | 0     | 0     | 0     | 1     |
| Max. 1-Hour Conc. (ppm)                 | 0.15  | 0.20  | 0.14  | 0.16  | 0.22  |
| <b>Carbon Monoxide:</b>                 |       |       |       |       |       |
| 1-Hour > 20. ppm                        | 0     | 0     | 0     | 0     | 0     |
| 8-Hour > 9. ppm                         | 0     | 0     | 0     | 0     | 0     |
| Max. 1-Hour Conc. (ppm)                 | 7.    | 7.    | 7.    | 7.    | 7.    |
| Max. 8-Hour Conc. (ppm)                 | 4.6   | 3.9   | 5.1   | 3.4   | 3.6   |
| <b>Nitrogen Dioxide:</b>                |       |       |       |       |       |
| 1-Hour > 0.25 ppm                       | 0     | 0     | 0     | 0     | 0     |
| Max. 1-Hour Conc. (ppm)                 | 0.20  | 0.16  | 0.14  | 0.15  | 0.21  |
| <b>Sulfur Dioxide:</b>                  |       |       |       |       |       |
| 1-Hour > 0.25 ppm                       | 0     | 0     | 0     | 0     | 0     |
| 24-Hour > 0.05 ppm                      | 0     | 0     | 0     | 0     | 0     |
| Max. 1-Hour Conc. (ppm)                 | 0.07  | 0.08  | 0.06  | 0.04  | 0.09  |
| Max. 24-Hour Conc. (ppm)                | 0.021 | 0.015 | 0.013 | 0.011 | 0.019 |
| <b>Total Suspended Particulates:</b>    |       |       |       |       |       |
| 24-Hour > 100 ug/m <sup>3</sup>         | 0/61  | 0/61  | 1/61  | 1/30  | ----  |
| 24-Hour > 260 ug/m <sup>3</sup>         | 0/61  | 0/61  | 0/61  | 0/30  | ----  |
| Max. 24-Hour Conc. (ug/m <sup>3</sup> ) | 88.   | 96.   | 119.  | 100.  | ----  |
| <b>Lead Particulates:</b>               |       |       |       |       |       |
| 1-Month > 1.5 ug/m <sup>3</sup>         | 0/12  | 0/12  | 0/12  | 0/12  | 0/12  |
| Max. 1-Month Conc. (ug/m <sup>3</sup> ) | 0.60  | 0.38  | 0.28  | 0.19  | 0.13  |
| <b>Sulfate Particulates:</b>            |       |       |       |       |       |
| 24-Hour > 25. ug/m <sup>3</sup>         | 1/61  | 0/54  | 0/60  | 0/51  | 0/57  |
| Max. 24-Hour Conc. (ug/m <sup>3</sup> ) | 18.0  | 15.4  | 17.6  | 13.3  | 17.2  |
| <b>Respirable Particulates (PM-10):</b> |       |       |       |       |       |
| 24-Hour > 50 ug/m <sup>3</sup>          | ----  | ----  | 3/51  | 5/61  | 3/56  |
| 24-Hour > 150 ug/m <sup>3</sup>         | ----  | ----  | 0/51  | 0/61  | 0/56  |
| Max. 24-Hour Conc. (ug/m <sup>3</sup> ) | ----  | ----  | 104.  | 68.   | 58.   |

Source: California Air Resources Board, Summary of Air Quality Data, 1984-1988.  
 Chula Vista Monitoring Station except for Lead & Sulfate Particles  
 which are from San Diego APCD Island Avenue Station.

---- = no data



not been officially published) of monitoring data from the Chula Vista (80 East "J" Street) station. Progress toward cleaner air is seen in almost every pollution category. The only national clean air standard that was exceeded throughout the five-year monitoring period was the hourly ozone standard which was exceeded an average of 3-4 times per year (once per year is allowable). The more stringent state standards for ozone and for total suspended and respirable particulates (dust) were exceeded on a somewhat higher frequency, but overall air quality in Chula Vista is nevertheless very good in comparison to other areas of the SDAB.

Air Quality Management Planning: The continued violations of national AAQS in the SDAB, particularly those for ozone in inland foothill areas, require that a plan be developed outlining the stationary and mobile source pollution controls that will be undertaken to improve air quality. In San Diego County, this attainment planning process is embodied in a regional air quality management plan developed jointly by the APCD and SANDAG with input from other planning agencies. This plan, originally called RAQS (Regional Air Quality Strategies), was last updated about seven years ago and called the 1982 State Implementation Plan Revisions (1982 SIP Revisions). The underlying premise of this plan was that the County can have continued economic and population growth and still achieve basinwide clean air. The plan outlined the analysis methodology and charted the necessary steps to reduce the existing excess emissions burden plus offset the air pollutants associated with continued growth. The 1982 SIP Revisions recognized that there are meteorological patterns under which county emissions were uniquely responsible for ozone violations, and there were also conditions where interbasin transport was a major factor in observed air quality. The basic conclusion of the 1982 SIP was that emissions will have been sufficiently reduced by the end of 1987 such that all county-related ozone violations will have been eliminated, but that violations due to transport from the Los Angeles Basin will continue as long as that basin continues to experience very unhealthy ozone levels.

With the expiration of the 1987 target attainment date, the SIP Revisions are now again being revised in another update cycle. The new plan is designed to lead to incremental improvement toward a long-range attainment target date and to ensure that programs are in place to continually off-set the emissions increases associated with continued growth of the basin. Current planning calls for sufficient emissions reductions to meet the federal ozone standard by 1996-97 under weather conditions when there is no significant influx of pollution from the Los Angeles Basin. The passage of the California Clean Air Act requiring future compliance with the more stringent state ozone standard will entail additional planning and control to meet the standard early into the 21st century. The proposed bayfront development relates to the SIP Revisions through incorporation of sub-regional development plans into regional growth estimates. If the project has been correctly anticipated in the current SANDAG growth forecasts (the basis for SIP transportation emissions forecasts), then it will not cause any unanticipated regional air quality impacts. If, however, the proposed redevelopment significantly exceeds the intensity of development predicted for the Chula Vista bayfront or occurs sooner than predicted by regional growth forecasts, it will be inconsistent with the SIP Revisions.

## Impacts

Residential, recreational and commercial land uses such as those comprising the Midbayfront redevelopment area impact air quality almost exclusively through the vehicular traffic generated by the development. Such impacts occur basically on two scales of motion. Regionally, personal commuting, hotel/tennis club visitor and specialty retail site customer travel will add to regional trip generation and increase the vehicle miles traveled (VMT) within the local airshed. Locally, project traffic, especially at rush hour, will be added to the Chula Vista roadway system near the development site. If such traffic occurs during periods of poor atmospheric ventilation, is comprised of a large number of vehicles "cold-started" and operating at pollution inefficient speeds, and is driving on roadways already crowded with non-project traffic, there is a definite potential for the formation of microscale air pollution "hot spots" in the area immediately around the project site.

Secondary project-related atmospheric impacts derive from a number of other small, growth-connected emissions sources such as temporary emissions of dusts and fumes during project construction, increased fossil-fuel combustion in power plants and heaters, boilers, stoves and other energy consuming devices, evaporative emissions at gas stations or from paints, thinners or solvents used in construction and maintenance, increased air travel from business travelers, dust from tire wear and re-suspended roadway dust, etc. All these emission points are either temporary, or they are so small in comparison to project-related automotive sources that their impact is negligible. They do point out, however, that growth engenders increased air pollution emissions from a wide variety of sources, and thus further inhibits the near-term attainment of all clean air standards in the region.

One source unique to project implementation is the exhaust from the proposed on-site co-generation plant. Such plants are highly efficient in using heat directly to run a turbine, and then using the heat in the exhaust as a secondary heat source either to make more electricity using steam or to use waste heat in radiators, chiller plants (air conditioners) or to heat swimming pools, etc. The local generation of electricity transfers air pollution emissions that would have occurred in a power plant such as South Bay to the project site. In order to build such a co-generation plant, a series of air quality permits must be obtained from the APCD that ensures the APCD's concurrence that the plant will not create any adverse air quality impacts. If that conclusion cannot be proven to the APCD's satisfaction, the co-generation plant will not be built.

## **Construction Impacts**

The demolition of existing site land uses, the excavation of utility access, the preparation of foundations and footings, and building assembly will create temporary emissions of dusts, fumes, equipment exhaust and other air contaminants during the project construction period. In general, the most significant source of air pollution from project construction will probably be the dust generated during demolition, excavation and site preparation. Typical dust lofting rates from construction activities are usually assumed to average 1.2 tons of dust per month per acre disturbed. Dust control through regular watering and other fugitive dust abatement measures required by the San Diego APCD can reduce dust emission levels from 50-75 percent. Dust emissions rates, therefore, depend on the redevelopment rate and the care with which dust abatement procedures are implemented. It should be noted that much

of this dust is comprised of large particles that are easily filtered by human breathing passages and settle out rapidly on parked cars and other nearby horizontal surfaces. It thus comprises more of a soiling nuisance than any potentially unhealthy air quality impact. Although a considerable portion of the construction activity fugitive dust does settle out near its source, the smallest particles remain suspended throughout much of their transit across the air basin. Construction dust is, therefore, an important contributor to regional violations of inhalable dust (PM-10) standards. Because of its role in PM-10 violations, fugitive construction dust emissions should be controlled as carefully as possible.

Equipment exhaust as well will be released during temporary construction activities, particularly from mobile sources during site preparation and from on-site equipment during actual construction. Although the construction activity emission rates may be substantial (especially NO<sub>x</sub> from diesel-fueled trucks and on-site vehicles), they will be widely dispersed in space and time by the mobile nature of much of the equipment itself. Furthermore, daytime ventilation during much of the year in Chula Vista is usually more than adequate to disperse any local pollution accumulations near the project site. Any perceptible impacts from construction activity exhaust will, therefore, be confined to an occasional "whiff" of characteristic diesel exhaust odor, but not in sufficient concentration to expose any nearby receptors to air pollution levels above acceptable standards. As portions of the residential component are completed, the limited distance between site construction sources and nearby receptors make it important to minimize any localized concentrations of emissions (such as from trucks idling and queuing while waiting to unload dirt or to drop off building materials, and from project trucks blocking traffic on nearby streets that might cause high microscale levels of automotive exhaust). If measures are implemented to prevent multiple trucks from blocking traffic or from idling near occupied receptor sites, then construction activities should not create any unacceptable air quality impacts during project build-out.

### Vehicular Emissions Impacts

By far the greatest project-related air quality concern derives from the mobile source emissions that will result from the additional 43,000 daily trips that will be generated at project completion. At a typical residential and commercial trip length of around 6 miles per trip (a combination of longer commuting and shorter retail trips), the project may add around 250,000 vehicle miles traveled (VMT) to the regional traffic burden. Some of the trip generation and associated VMT may be overstated because some of the project-related traffic (such as hotel visitors) will be already present on the regional roadway system and would use similar facilities at some other San Diego County location if not at the Midbayfront project sites, but the project nevertheless represents a major contributor to additional vehicular air pollution emissions within the SDAB.

Automotive emissions can be readily calculated using a computerized procedure developed by the California ARB for urban growth mobile source emissions. This emissions model, called URBEMIS2 was initialized with trip generation factors specified by the traffic consultant, and run for a build-out year of 2000 and emissions were compared to the alternatives under consideration. The results from the model runs are summarized in Table 3-5 with the model output for each run included in Appendix E to this report.

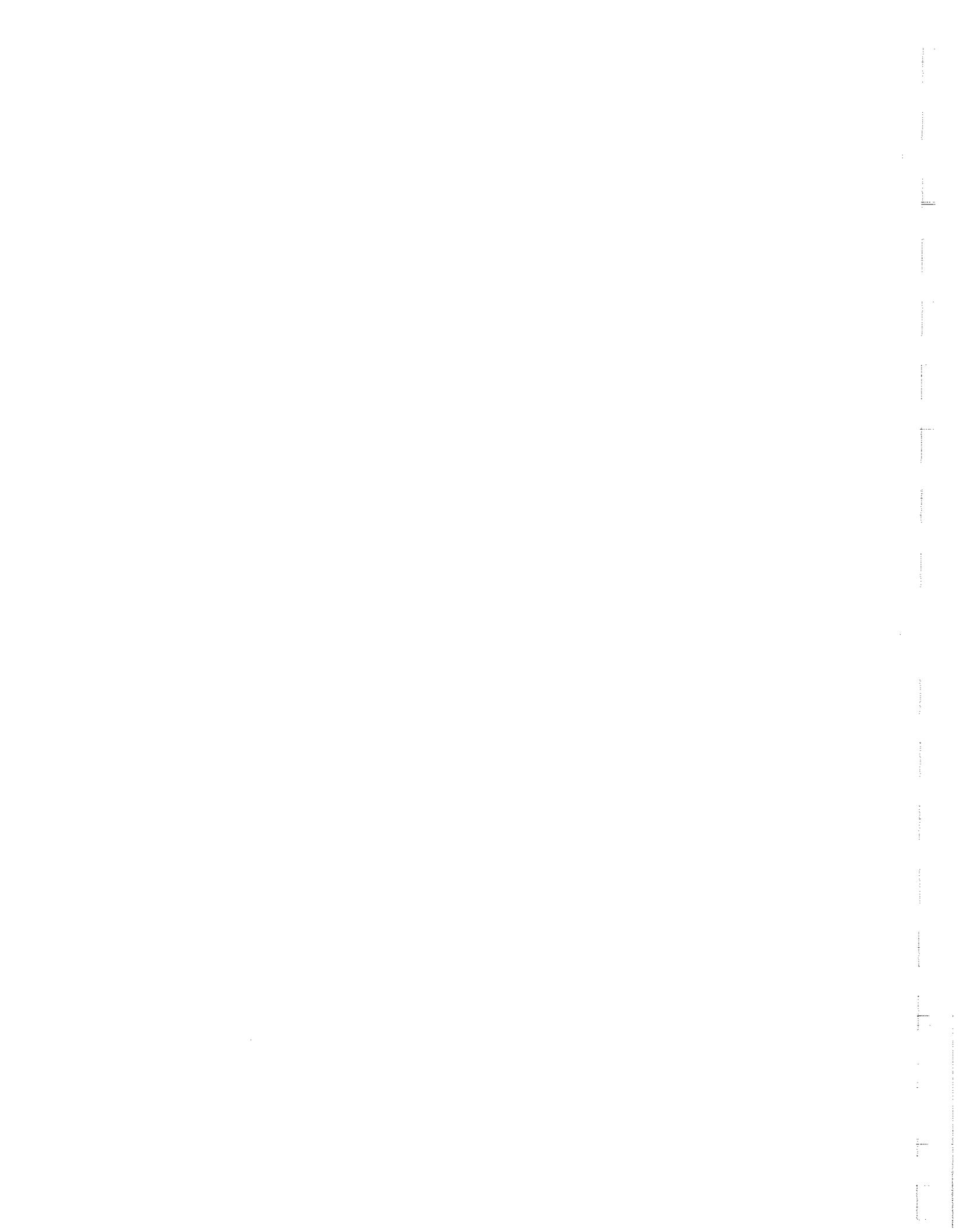


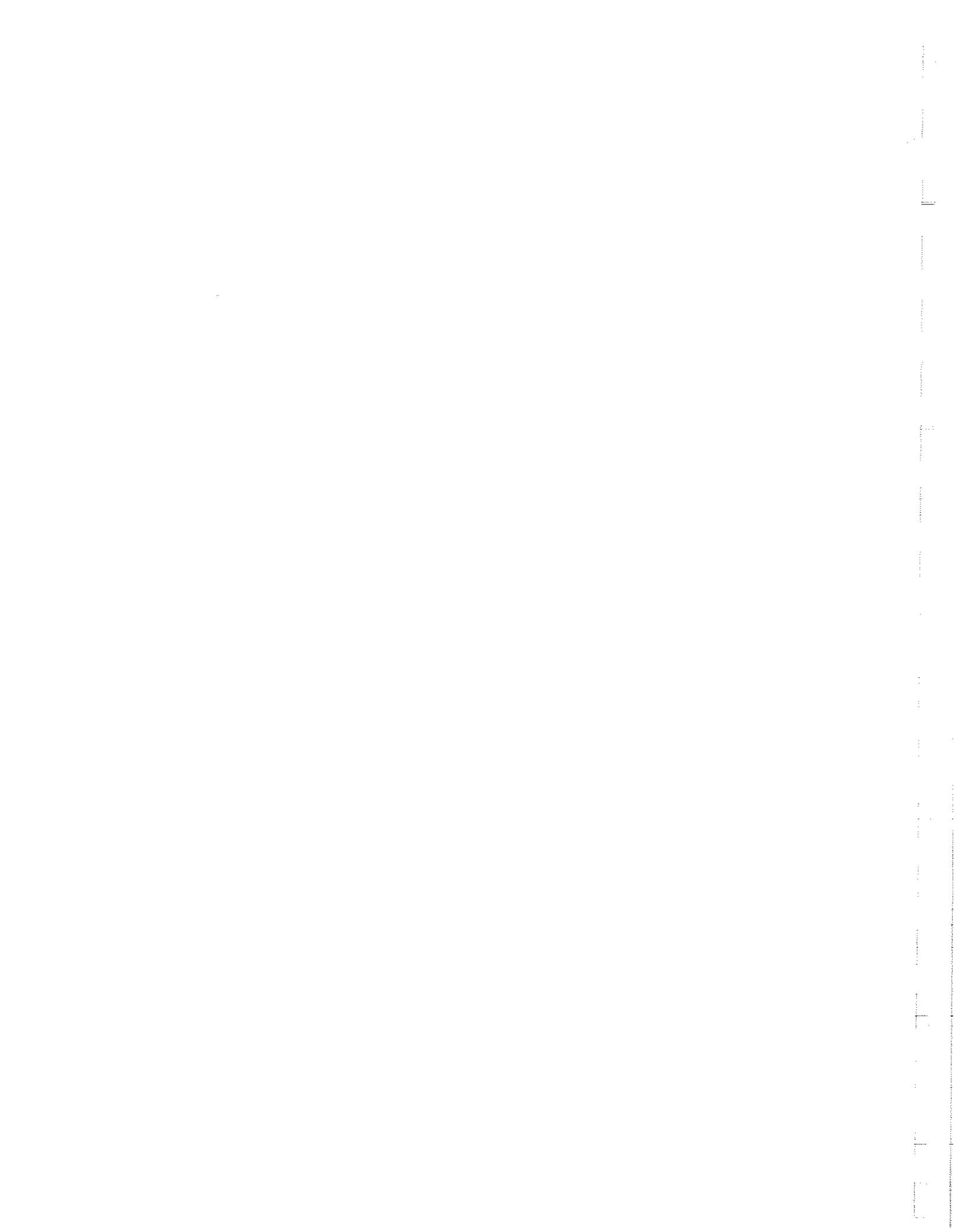
TABLE 3-5

## Mid-Bayfront Redevelopment Regional Air Pollution Emissions

| Scenario<br>Year                    | Emissions (tons/day) |                    |                    |
|-------------------------------------|----------------------|--------------------|--------------------|
|                                     | Reactive<br>Organics | Carbon<br>Monoxide | Nitrogen<br>Oxides |
| Proposed LCPA                       | 0.39                 | 4.93               | 0.49               |
| Existing Approved LCP               | 0.30                 | 3.75               | 0.38               |
| Alternative 3                       | 0.31                 | 3.83               | 0.39               |
| Alternative 4                       | 0.31                 | 3.83               | 0.39               |
| Alternative 5                       | 0.25                 | 3.06               | 0.32               |
| Year 2000 San Diego<br>Air Basin    | 212.25               | 817.70             | 142.75             |
| Year 2000 Project<br>Share of Basin | 0.18%                | 0.60%              | 0.34%              |

Assuming 92% of TOG = ROG

Source: URBEMIS2 Computer Model and 1982 APCD SIP Revisions.



Project traffic will add about 5 tons of carbon monoxide (CO) and 0.4 ton each of nitrogen oxides ( $\text{NO}_x$ ) and reactive organic gases (ROG) to the airshed for a 2000 build-out. Continued emissions reduction from the retirement of older, polluting cars will gradually reduce the overall project regional emissions impact slightly, but the project will continue to represent a small, but not negligible, portion of regional automotive emissions. Table 3-5 also shows that the project represents a small fraction of the regional emissions burden. The percentage fraction is small, but it is the sum of multiple small percentage emissions increments that comprise the basinwide burden and lead to the basin's continued violations of clean air standards, which is a significant regional impact. Thus, the project represents an incremental contribution to a regionally significant impact.

In terms of consistency with the growth assumptions of the SIP Revisions; the SIP is based on generic trip making characteristics for specified types of land uses. The proposed redevelopment will increase the intensity of land uses from those used in the SIP based on the existing approved LCP. The difference between the proposed LCP Resubmittal/Development Plan and the approved SIP represents "excess" emissions that have not been included in the regional air quality plan. However, since the demand for commercial space, hotel rooms and modern housing already presumably exists (it will not be created by the proposed development), and since much of the traffic to the site is already on the roadway system to access similar land uses elsewhere in the area, the redevelopment project is consistent with good air quality growth planning. By definition of consistency, the impact of project-related automotive emissions to the SIP, while substantial, is judged not significant.

While the project itself would have an incremental impact, the increase of traffic around the project site may create localized violations of ambient health standards. To evaluate the potential for the formation of any air pollution "hot spots," the California line source dispersion model CALINE4 was used to estimate receptor exposure at various intersections near the Chula Vista bayfront potentially impacted by redevelopment traffic. This model was initialized with maximum traffic and minimum dispersion conditions with and without project traffic in order to generate a worst-case impact assessment. CO was used as the indicator pollutant to determine if there was any air pollution "hot spot" potential. The results of the modeling exercise are summarized in Table 3-6. The hourly CO exposure near the five analyzed roadways where maximum localized CO impacts are likely to occur currently total from less than 1.0 to over 10.0 ppm above the regional background level. Continued emissions reductions from newer, less polluting automobiles will create a continuing reduction in future microscale CO levels despite projected increases in traffic levels. Future CO levels at most analysis locations will be similar to existing levels despite any projected traffic increases. If the roadway system can accommodate increased traffic volumes, future microscale CO levels, with or without the redevelopment, will be similar to what they are today. Since the "With Project" levels are well below any level of concern, any alternative development scenario impacts with lesser intensity are not an important air quality consideration.

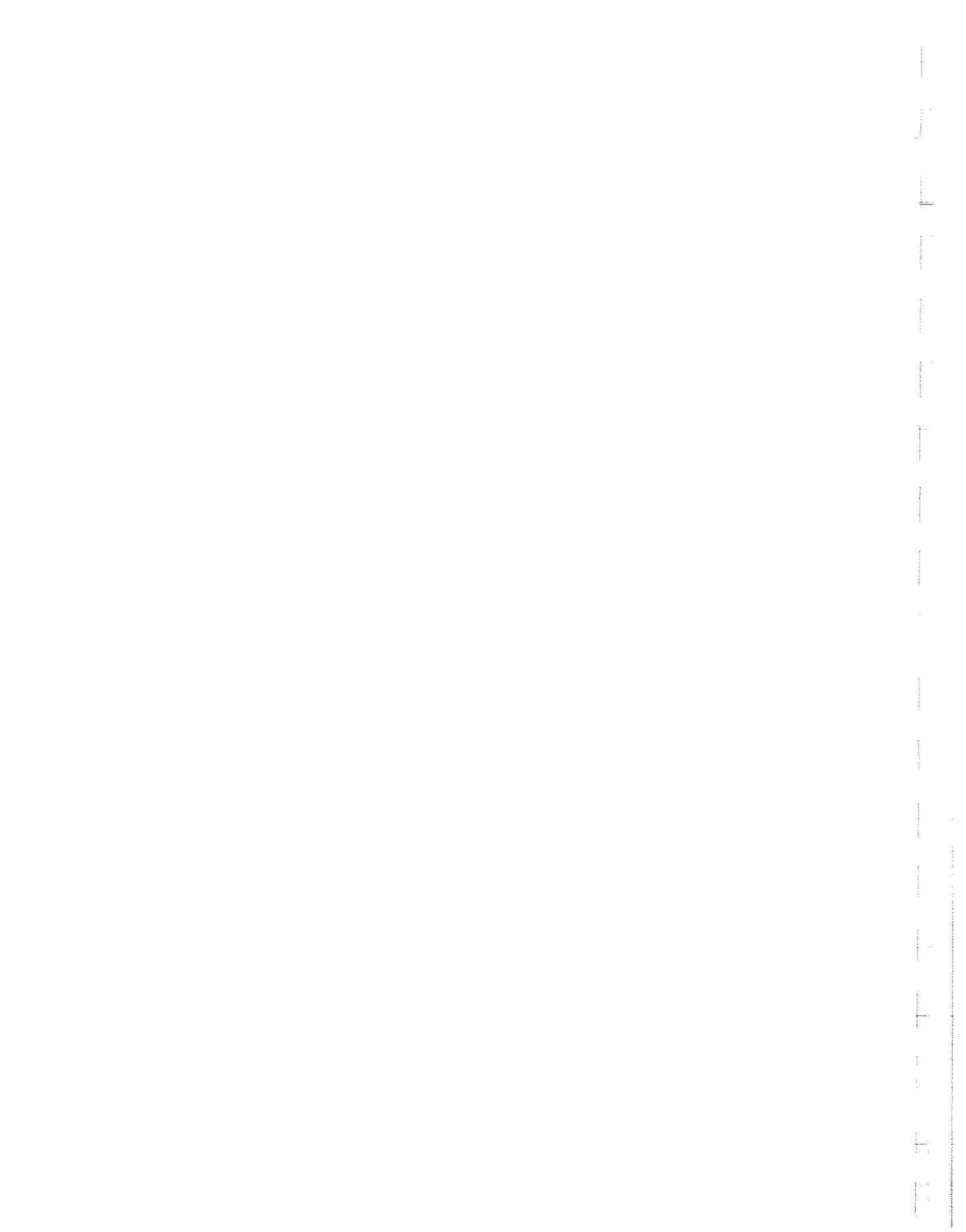


TABLE 3-6

**Mid-Bayfront Redevelopment Microscale Air Quality Impact Analysis**

(Hourly CO Concentrations in ppm - Standard = 20 ppm)

| Roadway Segment                 | Existing Traffic | Future W/Project |
|---------------------------------|------------------|------------------|
| <b>1. <u>"E" Street</u></b>     |                  |                  |
| I-5 -- Woodlawn                 | 10.2             | 6.7              |
| Bay Blvd. -- I-5                | 2.8              | 4.5              |
| <b>2. <u>Marina Parkway</u></b> |                  |                  |
| Bay Blvd. -- East Access        | **               | 2.2              |
| East Access -- F Street         | **               | 1.8              |
| F Street -- Bay Blvd. (S)       | 0.7              | 1.1              |
| <b>3. <u>"F" Street</u></b>     |                  |                  |
| Woodlawn -- Bay Blvd.           | 0.5              | 0.7              |
| Bay Blvd. -- Marina Parkway     | 0.3              | 0.6              |
| <b>4. <u>"H" Street</u></b>     |                  |                  |
| I-5 -- Woodlawn                 | 3.2              | 2.6              |
| <b>5. <u>"J" Street</u></b>     |                  |                  |
| I-5 -- Woodlawn                 | 1.6              | 1.5              |

\*\* = Not yet built

Source: Project Traffic Study and CALINE4 Roadway Emissions Dispersion Model.

| Stability Class<br>(Pasquill) | Wind Speed<br>(m/sec) | Particulate Level*<br>( $\mu\text{g}/\text{m}^3$ ) | Distance from Stack<br>(m) |
|-------------------------------|-----------------------|----------------------------------------------------|----------------------------|
| A                             | 3.15                  | 0.028                                              | 290                        |
| B                             | 5.24                  | 0.028                                              | 294                        |
| C                             | 15.98                 | 0.040                                              | 180                        |
| D                             | 12.99                 | 0.028                                              | 458                        |
| E                             | 2.27                  | 0.016                                              | 2429                       |
| F                             | 2.42                  | 0.016                                              | 3620                       |

\* = 24-hour total suspended particulate level

Source: PTPLU Model, 45' co-generation plant stack height, degrees F exhaust.

The maximum predicted ambient particulate level of  $0.04 \mu\text{g}/\text{m}^3$  is immeasurably small compared to an ambient respirable particulate standard of  $50 \mu\text{g}/\text{m}^3$ . Because the airborne concentration of particulate from the plant stack is minuscule, any deposition effects will be similarly insignificant.

Cumulative impacts will result from the additive emissions of site mobile and stationary sources, as well as from site-related air emissions within the basin as a whole. The plume from any site sources such as a co-generation plant, however, will cover only a few feet in horizontal extent while mobile source emissions are distributed widely in space. Because the co-generation plant plume is hot and emitted from an elevated stack, it will not reach maximum ground-level concentrations until it is carried far from the project area. No standards or thresholds exist for a project's contribution of vehicular source emissions, or total emissions, including vehicular plus stationary source emissions. The following table adds the mobile sources to the stationary source.

| Pollutant Species      | Mobile Sources | Cumulative Emissions (ton/day) |         |
|------------------------|----------------|--------------------------------|---------|
|                        |                | Co-Generation                  | Total** |
| Carbon Monoxide        | 4.93           | 0.46*                          | 5.39    |
| Reactive Organic Gases | 0.39           | 0.12*                          | 0.51    |
| Nitrogen Oxides        | 0.49           | 0.44*                          | 0.93    |
| Sulfur Oxides          | 0.20           | 0.00                           | 0.20    |
| Particulates           | 0.30           | 0.02                           | 0.32    |

\* Exceeds New Source Review (NSR) threshold of 150 lb/day for Reactive Organic Gas, Nitrogen Oxides, Sulfur Oxides, Particulates; 550 lb/day for Carbon Monoxide. The NSR threshold applies only to on-site stationary sources, not to off-site mobile source emissions.

\*\* The co-generation plant plume is a narrow, elevated and compact mass of gas, while car exhaust is a widely diffused ground-level source. The cumulative "Total" refers to a regional scale of emissions, and not to any local cumulative impact in the project vicinity.

As stated on the previous page, emissions exceeding the NSR threshold would have a significant regional air quality impact. It should be noted that the NSR threshold pertains only to stationary source emissions, and not to mobile, or vehicular, source emissions. NSR rules require documentation (1) that the facility is using Best Available Control Technology (BACT), (2) that it is shown by modeling that ambient air quality standards are not exceeded, and (3) that emissions for non-attainment species are off-set by concurrent emissions reductions elsewhere within the air basin (off-sets), before a permit will be issued by the APCD.

Regionally additive emissions from site traffic or stationary sources with the rest of the basin are evaluated in terms of planning consistency with the new regional air plan under development. The regional plan will incorporate the most recent version of the LCP for the Chula Vista bayfront, including any revisions likely to be adopted during the effective lifetime of the air quality plan. By virtue of incorporation of this proposed LCPR No. 8 (or any of the alternatives ~~including Alternatives 2, 3, 4, 5, 7, 8 or 9~~ adopted as an amendment to the LCP) into the air plan currently being prepared, no adverse impacts are predicted from consistency with this plan. See the DEIR, Volume I, Sections 4.2.5 and 5.2.5 for discussion of alternatives 8 and 9.

### Mitigation

The proposed redevelopment project creates a potentially significant air quality impact from development of the co-generation plant. Mitigation is required by the APCD before an authority to Construct and a Permit to Operate is issued. Mitigation would include concurrent reductions in NO<sub>x</sub>, ROG, and CO to "offset" project (co-generation plant) emissions. Mitigation must be achieved before the plant may be built. Mitigation would thus reduce the potential impact to a level below significant. Mitigation would also reduce the cumulative impact from the vehicular emissions added to the co-generation plant emissions.

Additionally, there are transportation control measures (TCMs) and temporary construction activity impact mitigation measures that must be incorporated into the proposed project to mitigate the project's incremental contribution to the regionally significant air basin impact. Measures that must be incorporated in project planning include:

- Dust control measures required by the AQMD will be implemented during construction, and monitored via the Mitigation Monitoring Program. Such measures include maintaining adequate soil moisture as well as removing any soil spillage onto traveled roadways through site housekeeping procedures.
- Reducing interference with existing traffic and preventing truck queuing around local receptors must be incorporated into any project construction permits. Construction traffic must be monitored via the Mitigation Monitoring Program; trucks must turn off engines while waiting, or not be allowed to enter the site again. This regulation could be undertaken by the on-site biological monitor. The permits should limit operations to daytime periods of better dispersion that minimizes localized pollution accumulation.
- Various transportation control measures (TCMs) must be incorporated into the project. Such measures would be aimed primarily at employees on the project site, but might also include site residents and visitors in certain instances. Measures that should be included are:
  - Airport shuttle services for destination resort visitors
  - Ridesharing
  - Vanpool Incentives
  - Alternate Transportation Methods
  - Work Scheduling for Off-Peak Hour Travel

- Transit Utilization
  - Program Coordination
  - Traffic Signal Coordination
  - Physical Roadway Improvements to Maintain LOS of "D" or Better
- The effective implementation of these various TCMs will be significantly enhanced if they are coordinated through a transportation management agency (TMA) dealing specifically with bayfront traffic demand management. Formation of such a TMA, including funding of a TMA coordinator and mandatory tenant participation through CCR agreements in tenant leases, will maximize the potential for emissions reduction. The establishment of minimum participation goals and the formation of a midbayfront TMA must be a condition of approval for the proposed LCPR No. 8 to mitigate air pollution effects from any increased development intensity.

#### Analysis of Significance

Potentially significant air quality impacts would occur from development of the co-generation plant ~~for the proposed project and Alternatives 3, 4, 5 and 8~~. A potential incremental contribution from vehicular sources to a regionally significant air quality impact would also occur. In addition, potential cumulative impacts would occur from the vehicular emissions added to the co-generation plant emissions. Mitigation measures must be implemented to reduce these impacts to a level below significant, including compliance with the APCD's requirements for co-generation plant impacts, dust control measures (construction), construction traffic monitoring, and implementation of Transportation Control Measures coordinated through a transportation management agency.

Once parking garages have been designed, an additional air quality analysis must be performed for potential impacts to users of the garages.

### 3.6 NOISE

#### Existing Conditions

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions by weighting sounds within the range of human sensitivity more heavily (middle A and its higher harmonics) in a process called "A-weighting" written as dB(A).

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called Leq), or alternately, as a statistical description of the sound level that is exceeded over some stated fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise metric called the Community Noise Equivalent Level (CNEL). An interior CNEL of 45 dB(A) is mandated for multiple family dwellings, and is considered a desirable noise exposure for single family dwelling units as well. Since typical noise attenuation within residential structures is about 15-20 dB, an exterior noise exposure of 65 dB CNEL is typically the design exterior noise exposure for new residential dwellings in California. Because commercial or industrial uses are not occupied on a 24-hour basis, a less stringent noise/land use compatibility criterion is generally specified for these less noise sensitive land uses.

These guidelines form the basis for the Noise Element of the City of Chula Vista's General Plan, which suggests a desirable exterior noise exposure of 65 dB(A) for residential and other noise sensitive uses. The City's noise policy states as its first objective that every citizen has a right to live in an environment where noise is not detrimental to his or her life, health, and enjoyment of property. Within the policy's implementation provisions, there is a mandate for the City to consider the effects of noise, especially from transportation sources, in its land use decisions in order to realize the above objective.

Existing noise levels within the Midbayfront project area derive from surface vehicular sources on adjacent roadways, primarily on I-5. In order to characterize current noise levels in and around the redevelopment area, a brief on-site noise survey was conducted on May 4, 1989. Short-term (30 minute Leq) noise levels within the planning area were monitored at three locations using standard Caltrans roadway noise monitoring protocols. The purpose of this monitoring was two-fold. On-site monitoring provides a "real-world" characterization of baseline noise levels that take into account site-specific vehicle mixes, travel speeds, noise obstructions, etc. Secondly, the monitoring provides a calibration data base by which a computer model of traffic noise can be validated. The calibrated model

can then be used with a higher degree of confidence to future noise distributions from changing traffic patterns.

The Midbayfront readings, in conjunction with concurrent traffic counts and speed checks on nearby I-5, were compared to the noise level predicted by the federal highway traffic noise prediction model (FHWA-RD-77-108) initialized with the latest California vehicle noise (CALVENO-85) emissions data. The results of the measurements were as follows:

| Location                            | $L_{eq}$ | $L_{max}$ | $L_{min}$ |
|-------------------------------------|----------|-----------|-----------|
| South end of former greenhouse area | 53.4     | 71.6      | 43.6      |
| North end of former greenhouse area | 53.4     | 75.9      | 43.6      |
| Mid-point between two sites above   | 55.1     | 78.1      | 43.3      |

Source: On-site measurements, 5/4/89, B&K Model 2230 Sound Level Meter -- 30 minute readings each site, 1 p.m. - 3 p.m.

When the traffic information from I-5 was used to run the FHWA Noise Model, an  $L_{eq}$  level of 61.4 dB(A) was predicted for the above measurement locations. Clearly, the area is considerably quieter because the traffic noise is partially screened by some topographical constraint and partially by some existing structures (buildings, overpasses, etc.) near the freeway. The FHWA Model, if used to predict noise exposure to residences and other noise-sensitive uses within the redevelopment area, will need to be adjusted to compensate for the 6-8 dB overprediction created by screening effects. The degree of overprediction will also be different (less) for exteriors of tall residences within the project area because the obstruction to line-of-sight propagation currently present at ground level will be less beneficial for receiver locations located well above ground level.

### Impacts

Two characteristic noise sources are typically identified with urban redevelopment. Construction activities, especially heavy equipment, will create short-term noise increases near various individual project sites. Upon completion, vehicular traffic on streets around the development area may create a higher noise exposure to Chula Vista residents beyond the noise levels currently experienced. Various on-site activities, such as the co-generation plant, a child care facility and outdoor active recreation may be locally "noisy," but such impacts will generally be confined on site and will not affect the non-project population. The following discussion of impacts associated with the cogeneration facility pertains to the proposed project and Alternatives 3, 4, 5 and 8. Alternatives 2, 7 and 9 do not include the co-generation facility, consequently, impacts related to this facility do not apply to these alternatives. Also, see the DEIR, Volume I, Sections 4.2.6 and 5.2.6.

## **Construction Noise Impacts**

**Temporary** Construction noise impacts will vary markedly because the noise strength of construction equipment ranges widely as a function of the used and its activity level. **Short-term** Construction noise impacts tend to occur in phases dominated initially by demolition of existing structures and large earth-moving sources, then by foundation and parking lot construction, and finally by finish construction. The demolition and earth-moving sources are the noisiest, with equipment noise typically ranging from 75 to 90 dB(A) at 50 feet from the source. Pile drivers may have equipment noise levels in excess of 100 dB at 50 feet from the source. Point sources of noise emissions are atmospherically attenuated by a factor of 6 dB per doubling of distance. The quieter noise sources will, thus, drop to a 65 dB exterior/45 dB interior noise level by about 200 feet from the source while the loudest will require over 1000 feet from the source to reduce the 90+ dB(A) source strength to an acceptable 65 dB(A) exterior exposure level. Construction noise sources are not strictly relatable to a community noise standard because they occur only during selected times and the source strength varies sharply with time. The penalty associated with noise disturbance during quiet hours and the nuisance factor accompanying such disturbance usually leads to time limits on construction activities imposed as conditions on construction and use permits. The weekday hours from 7 a.m. to 7 p.m. are typically the allowed times for construction activities if there are occupied dwellings within a reasonable exposure zone surrounding the construction site.

Materials handling and small stationary noise sources have lower initial noise levels, and their corresponding noise impact zones during later phases of construction are, therefore, much smaller. Equipment size is also often smaller (compressors, generators, etc.) such that they lend themselves to placement in areas where existing structures or larger pieces of equipment may screen a portion of the noise transmission.

Although construction noise impacts occur primarily on-site and are largely masked by the existing I-5 background, the noise sensitivity of the surrounding ecological habitat may create unique noise concerns. In particular, birds may be startled by sudden loud equipment noise and their nesting or breeding behavior may be upset by intermittent noise intrusion. Birds can often acclimate themselves to elevated noise if the noise is steady or rhythmic. Sudden changes are thus a greater concern than magnitude. Behavioral sensitivity also varies with season and related bird behavior. Given that construction cannot be readily performed without making noise, especially to erect footings in saturated soils, the most effective wildlife impact mitigation is to schedule the noisiest construction activities when birds are least likely to be breeding or nesting near or on the project site. These biological impacts and mitigation measures are discussed in detail in the following section, Biology.

## **Vehicular Noise Impacts**

Long term noise concerns from the increased development intensity of the community area center primarily on mobile source emissions on the major roadways in the redevelopment area. These concerns were addressed using the FHWA Highway Traffic Noise Model previously cited in the environmental setting section. The model calculates the Leq noise

level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, speeds, or noise barriers. Because the project will create traffic volume changes on a large number of roadways, generic runs for freeway and arterial roadway sources were made and noise levels were calculated based on a logarithmic volume ratio adjustment to the reference volume noise level. Table 3-7 summarizes the calculated CNEL at 100' from the roadway centerline for three traffic scenarios (existing--no project, with project, and with project based on SANDAG traffic projections) at each of the 14 links analyzed. Table 3-8 shows the corresponding distance from the centerline to the 65 CNEL contour for each scenario and each link. By way of reference, a 1 dB increase in noise level is an almost imperceptible increase even under very quiet conditions whereas a 3 to 5 dB increase becomes noticeable when the sound is superimposed upon typical interior noise levels in a house. Any increase above 5 dB is immediately perceptible. The maximum noise increases (CNEL) from project implementation along each of the area streets compared to existing levels do reach the 3-5 dB potentially significant level at three roadway segments west of I-5. Along each of these segments, however, there are currently no noise-sensitive land uses that will suffer noise annoyance from increased traffic. Even with the proposed project, the distance from roadway centerline to the 65 dB CNEL contour is 75' or less such that the traffic noise levels with project buildout represent little constraint on any development potential. These noise increases from project traffic which raise noise levels from the upper 50 dB range into the low 60 dB CNEL exposure range also occur where freeway background noise levels are already well above any project-related impact. Given the logarithmic nature of noise description, the high background levels (seen in Table B to extend to 450' + from the freeway) will substantially mask any local changes on the roadway system near the project site. These considerations all suggest that traffic noise impacts from implementation of the proposed revised LCP and development project will be insignificant.

Any mixed use project with minimal distance buffer between diverse land uses has a potential for conflict from noise acceptable within a commercial or recreational environment not being acceptable at an adjacent residential use or within the sleeping area of an on-site child care center. The conceptual master plan avoids most such conflicts by using Marina Parkway as a physical separation between the apartments and most commercial/recreational site uses. The one on-site concern may be the play area from the child care center which is around 800 feet from the freeway and around 500 feet from the exhaust stacks of the co-generation plant. Both separations are generally adequate to create an acceptable outdoor play area noise exposure, particularly if suitable mufflers are used on the plant. A performance standard to limit exhaust noise from the co-generation plant to a maximum of 50 dB by day and 45 dB at night at the child care play area and across "F" Street at the "F" & "G" Street Marsh may be an appropriate noise limit to minimize noise intrusion on either children playing or on nearby wildlife. The use of a noise barrier along the eastern play area boundary between the ice rink and child care building is also recommended to screen out I-5 traffic noise and thus allow for quiet outdoor activities as well as active play within the play area.

TABLE 3-7

Roadway Noise Exposure (CNEL dB[A]) at 100 Feet from SANDAG Buildout

| Roadway Segment             | Existing | Ex. + Proj<br>Level | Proj<br>Impact | SANDAG Buildout<br>Level | SANDAG Buildout<br>Impact |
|-----------------------------|----------|---------------------|----------------|--------------------------|---------------------------|
| 1. I-5 North of H St.       | 78.1     | 78.5                | +0.4           | 79.9                     | +1.8                      |
| 2. I-5 South of H St.       | 77.9     | 78.3                | +0.4           | 80.2                     | +2.3                      |
| 3. E St. East of I-5        | 67.9     | 67.6*               | -0.3           | 67.6                     | -0.3                      |
| 4. E St. I-5 - Bay Bl.      | ----     | 66.5                | ----           | 67.1                     | ----                      |
| 5. E St. West of Bay Bl.    | ----     | 66.1                | ----           | 65.4                     | ----                      |
| 6. F St. East of I-5        | 58.7     | 61.2                | +2.5           | 62.8                     | +4.1                      |
| 7. F St. West of Bay Bl.    | 56.9     | 60.9                | +4.0           | 62.3                     | +5.4                      |
| 8. H St. East of I-5        | 65.8     | 66.0                | +0.2           | 66.9                     | +0.1                      |
| 9. H St. West of I-5        | ----     | 62.2                | ----           | ----                     | ----                      |
| 10. J St. East of I-5       | 63.8     | 64.4                | +0.6           | 66.4                     | +2.6                      |
| 11. Tidelands W. of Bay Bl. | 60.2     | 63.1                | +3.1           | 63.9                     | +3.9                      |
| 12. Bay Bl. East to F St.   | 58.1     | 61.9                | +3.8           | 59.6                     | +1.5                      |
| 13. Bay Bl. F to H St.      | ----     | 60.2                | ----           | 61.2                     | ----                      |
| 14. Bay Bl. H to J St.      | 58.0     | 59.1                | +1.1           | ----                     | ----                      |

\* = Includes ADT reduction from I-5/SR-54 direct connectors

---- = no data

Source: FHWA-RD-77-108 Highway Traffic Noise Model (Caltrans microcomputer version OFA 1/21/85, mod. 7/87)



TABLE 3-8  
Distance from Centerline to 65 dB(A) CNEL Contour

| Roadway Segment             | Existing | Ex. + Proj<br>Dist. | Impact | SANDAG Buildout<br>Dist. | Impact |
|-----------------------------|----------|---------------------|--------|--------------------------|--------|
| 1. I-5 North of H St.*      | 297'     | 316'                | +19'   | 392'                     | +95'   |
| 2. I-5 South of H St.**     | 457'     | 486'                | +29'   | 651'                     | +194'  |
| 3. E St. East of I-5        | 156'     | 149'*               | -7'*** | 149'                     | -7'*** |
| 4. E St. I-5 - Bay Bl.      | ----     | 126'                | ----   | 138'                     | ----   |
| 5. E St. West of Bay Bl.    | ----     | 118'                | ----   | 106'                     | ----   |
| 6. F St. East of I-5        | <50'     | 56'                 | >6'    | 71'                      | >21'   |
| 7. F St. West of Bay Bl.    | <50'     | 53'                 | >3'    | 66'                      | >16'   |
| 8. H St. East of I-5        | 113'     | 117'                | +4'    | 134'                     | +21'   |
| 9. H St. West of I-5        | ----     | 65'                 | ----   | ----                     | ----   |
| 10. J St. East of I-5       | 83'      | 91'                 | +8'    | 124'                     | +41'   |
| 11. Tidelands W. of Bay Bl. | <50'     | 75'                 | >25'   | 84'                      | >34'   |
| 12. Bay Bl. East to F St.   | <50'     | 62'                 | >12'   | <50'                     | ----   |
| 13. Bay Bl. F to H St.      | ----     | <50'                | ----   | 56'                      | ----   |
| 14. Bay Bl. H to J St.      | <50'     | <50'                | ----   | ----                     | ----   |

\* = Includes 6 dB reduction for topographical screening

\*\* = Includes 3 dB reduction for topographical screening

\*\*\* = Includes I-5/SR-54 connector

---- = no data

Source: FHWA-RD-77-108 Highway Traffic Noise Model (Caltrans microcomputer version OFA 1/21/85, mod. 7/87)



## Mitigation

Noise impacts from increased project area traffic represent only a minor increase in existing exposure. No mitigation of long-term traffic noise is indicated beyond citing new residential uses either with enough set-back to meet the City's land use compatibility criterion or through the use of perimeter walls to achieve noise exposure guidelines.

**Short-term** Construction noise intrusion should be limited by conditions on construction permits to weekday hours with least noise sensitivity. Those same permits should also specify construction access routing to minimize construction truck traffic past existing residential park or other noise sensitive uses.

Child care center noise exposure should be minimized by establishing a noise performance standard on co-generation exhaust stack noise met through the use of silencers, and by using a noise barrier along the eastern play area boundary to screen out traffic noise. A performance standard of 45 dB at night and 50 dB by day at 400 feet from the exhaust stack is recommended to prevent excessive exhaust noise intrusion. The measures should be implemented and monitored via a Mitigation Monitoring Program.

## Analysis of Significance

Potentially significant noise impacts could occur from construction activities, and from incompatible land uses (specifically the child care center in close proximity to noise from I-5 and from the co-generation facility exhaust stack for the proposed project and Alternatives 3, 4, 5 and 8). These measures can be mitigated to a level below significant by limiting construction activities to certain times, limiting construction access routes, establishing a noise performance standard on the co-generation stack, and by implementing a noise barrier along the eastern end of the child care facility.

### 3.7 BIOLOGY

#### Existing Conditions

##### Botanical Resources

###### Vegetation

The historically high levels of urbanization, clearing, cultivating, filling, and discing of portions of the area have resulted in disturbance of the majority of the uplands within the Midbayfront. Naturally vegetated lands of the area are limited to the existing salt marshes and the re-established Freshwater (Brackish) Marsh habitats associated with the seasonal marsh above the "F" & "G" Street Marsh and various minor drainage swales along roadways. Heavily disturbed Coastal Sage Scrub vegetation is found in a small stand near the mouth of the "F" & "G" Street Marsh. Outside of the Midbayfront Subarea, remnant Coastal Sage Scrub and Maritime Succulent Sage Scrub plant communities remain on Gunpowder Point and along the southern fringes of the Sweetwater Marsh. The majority of these assemblages are believed to represent natural re-establishment following long-term abandonment of agricultural or industrial activities (see Figure 3-V).

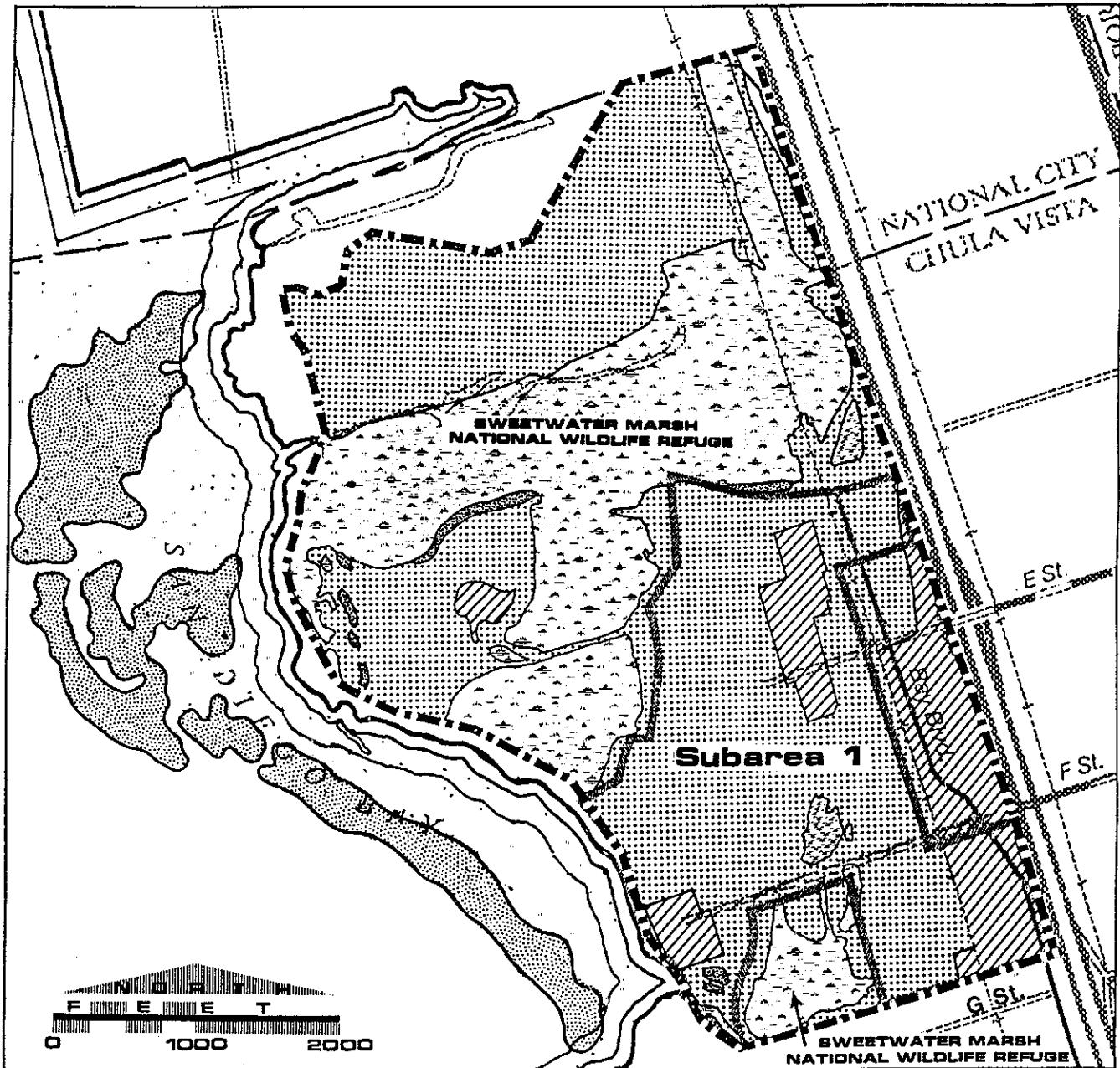
##### Disturbed Fields/Ruderal Agricultural

The predominant upland vegetation within the northern Midbayfront area consists of disturbed fields dominated by weedy plant taxa including Russian-Thistle (*Salsola australis*), Short-pod Mustard (*Brassica geniculata*), Garland Chrysanthemum (*Chrysanthemum coronarium*), and Fennel (*Foeniculum vulgare*). Also present in these uplands are several exotic grasses including bromes (*Bromus* spp.), Slender Oats (*Avena barbata*), and Bermuda-Grass (*Cynodon dactylon*). The upland fields have been under cultivation for many years and remnant crop plants continue to persist. These include several vegetable crops such as tomatoes (*Lycopersicon esculentum*), lettuce (*Lactuca sativa*), and cabbage (*Brassica oleracea*), as well as Nettle (*Urtica urens*) in the high nitrate soils.

##### Coastal and Maritime Succulent Sage Scrub

Along the southern fringes of the Sweetwater Marsh, in the southwestern corner of the Midbayfront, and in scattered locations on Gunpowder Point, relictual or recolonizing Maritime Succulent and Coastal Sage Scrub communities exist. In addition, stockpiled soil has been seeded with a native Coastal Sage mix and is beginning to show dominance by such species. These areas are dominated by such scrub elements as Flat-top Buckwheat (*Eriogonum fasciculatum*), Coast Cholla (*Opuntia prolifera*), and California Sagebrush (*Artemisia californica*). Also present within the Gunpowder Point stands are such species as the sensitive Coast Barrel Cactus (*Ferocactus viridescens*), and Snake Cholla (*Opuntia parryi* var. *serpentina*). Two remnant stands of Yerba Reuma (*Frankenia palmeri*) occur on Gunpowder Point as the only known United States and northernmost populations of this species. These stands are located at the fringes of the salt marsh habitats and are

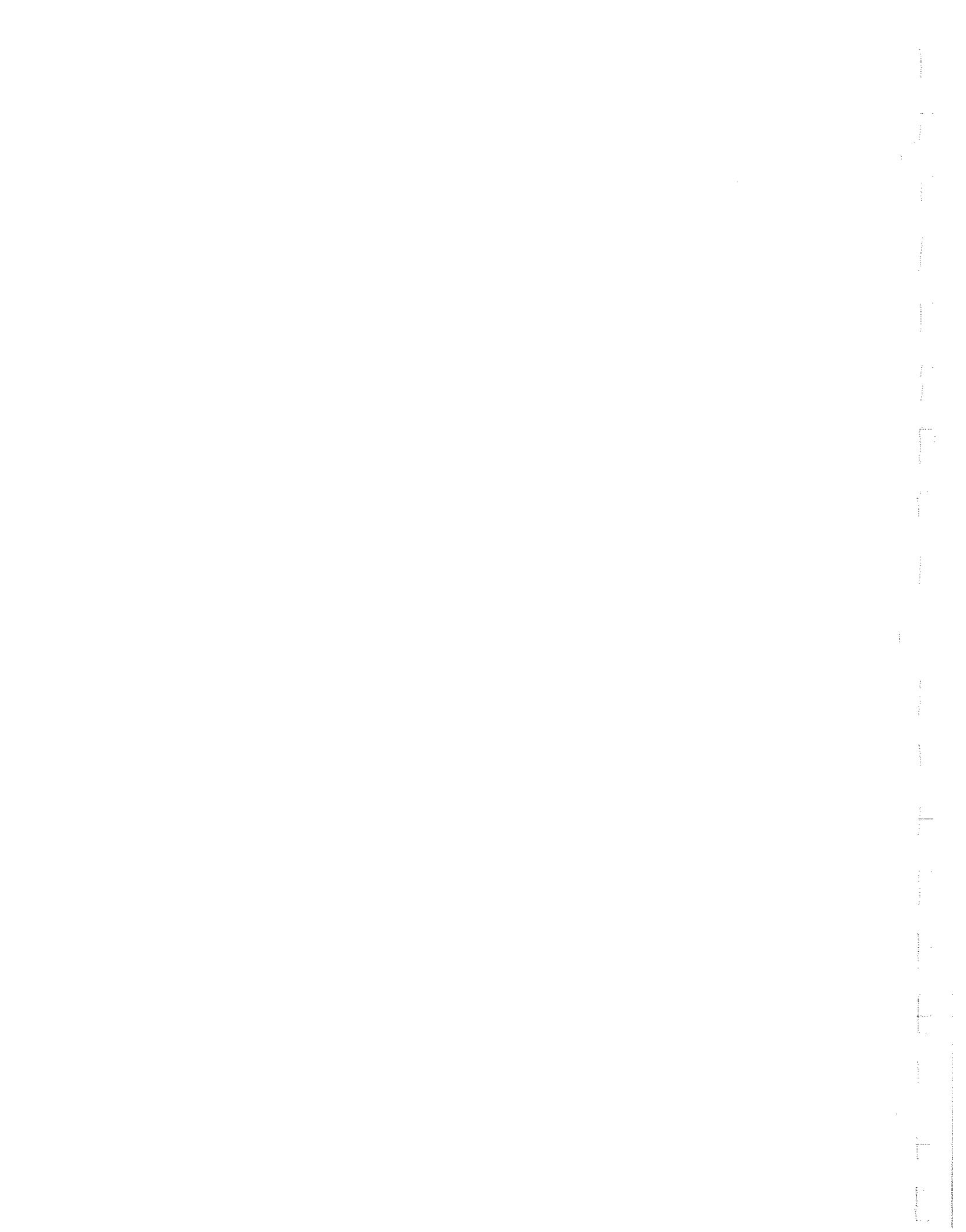
LCP  
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8



- Brackish Marsh
  - Coastal Salt Marsh
  - Eelgrass Meadow
  - Urbanized Areas
  - Disturbed Areas/Agriculture
  - Diegan Sage Scrub/Succulent Sage Scrub
- LCP Resubmittal Boundary

VEGETATION

Figure 3-V



surrounded by non-native, annual grasses and fragmented Maritime Succulent Scrub vegetation.

#### Freshwater and Brackish Marsh

A few areas of Freshwater and Brackish Marsh occur within and adjacent to the Midbayfront planning area. The largest of these occurs northeast of the planning area within a locale being heavily impacted by construction traffic for the joint Sweetwater River Flood Control/State Route 54 project. The second major marsh area is located north of "F" Street across from the "F" & "G" Street Marsh. This site is referred to as the seasonal Freshwater Marsh, although it is substantially brackish in nature.

Other minor marshlands occur adjacent to the "F" & "G" Street salt marsh and in an extremely small roadside depression near the Santa Fe Railroad right-of-way and "F" Street. This last site is almost imperceptible and is characterized only by the well-defined dominance of the facultative wetland indicator plants, *Distichlis spicata* and *Rumex crispus*. The larger Freshwater/Brackish Marsh areas are characterized by the presence of sizeable stands of California Bulrush (*Scirpus californicus*), Alkali Bulrush (*S. robustus*), Soft-flat Cattails (*Typha latifolia*), and Spiny Rush (*Juncus acutus*).

~~Large areas of the lower seasonal "Freshwater" Marsh are currently dominated by the sensitive *Suaeda esteroa*, which has recently expanded in population following the few years of drought. This species is also showing up along the fringes of the "F" & "G" Street Marsh, Vener Pond, the southern edges of the "E" Street Marsh, and on the southeastern salt pannes of the Sweetwater Marsh; however, nowhere is its presence as pronounced as it is in the seasonal marsh.~~

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#### Coastal Salt Marsh

The National Wildlife Refuge north of the site supports approximately 198 acres of Coastal Salt Marsh habitat. These marshlands are dominated primarily by Pickleweed (*Salicornia virginica*), but also include a diverse assemblage of subordinate elements including Annual Pickleweed and Glasswort (*Salicornia bigelovii* and *S. subterminalis*), Arrow-grass (*Triglochin maritima*), Saltwort (*Batis maritima*), and Sea-lavender (*Limonium californicum*). In higher areas, unvegetated salt pannes are common and, in vegetated areas, Salt-cedar (*Monanthochloe littoralis*), Saltgrass, Alkali-weed (*Cressa truxillensis*), and Sea-blight are common along with Alkali-heath (*Frankenia salina*). Numerous tidal channels meander through the marshlands, both increasing the complexity of the dominating mid-marsh habitats and providing unique resources for fish and invertebrate fauna. Along the channel

meanders and in low-lying bench areas near the mouths of the various marshlands, vegetation is dominated by Cordgrass (*Spartina foliosa*).

Most of the salt marsh areas of the National Wildlife Refuge (NWR) are subject to occasional, if not frequent, tidal inundation. Mid-marsh areas begin to be covered by tides in excess of 5.5 feet MLLW and are all but submerged by tides in excess of 7 feet MLLW.

The Coastal Salt Marsh (CSM) vegetation in this area is remarkably very diverse and minimally disturbed. The introduced Australian Saltbush (*Atriplex lindleyi*) is infesting some otherwise intact marsh areas and will be a future management problem where marshlands are disturbed. Almost all of the native salt marsh plants known in southern California occur in the marsh complexes, including the state and federally listed "endangered" Salt Marsh Bird's-beak (*Cordylanthus maritimus*), the *Frankenia palmeri*, previously discussed, and the uncommon California Sea-blight (*Suaeda esteroa*).

Vener Pond, previously dominated by open saltwater, which received only infrequent exchanges of water during extreme tides and storm events, has almost completely reverted to Coastal Salt Marsh following breaching of the northern levee linking the Gunpowder Point island with the Midbayfront and subsequent drainage of the pond, establishment of tidal channels, and successful recruitment of *Salicornia* throughout the pond basin.

#### Shallow Water/Mudflats

Open water and mudflat habitats occur along the shoreward fringes of San Diego Bay. These areas are primarily within the jurisdiction of the San Diego Unified Port District. The majority of the shallow water/mudflat habitats along the northern bayfront lack vascular plant communities. These areas are typically unvegetated with seasonal growths of ephemeral algae including Sea Lettuce (*Ulva* sp.), *Chaetomorpha linum*, *C. spiralis* and *Enteromorpha* species. Diatoms also form seasonally heavy coatings on the mudflats.

Within a narrow depth range, Eelgrass (*Zostera marina*) is common, forming dense meadows and scattered beds. These habitats are extremely dynamic in the warm shallows of southern San Diego Bay. The presence of these marine habitats plays a key function in providing habitat for fish, invertebrates and birds.

#### Flora

Eighty-five plant taxa were observed within the Bayfront study area (Table 1, Appendix C). Of these, 48 are non-native or weedy species. The large number of non-native plants is due to prior agricultural use and the high level of upland disturbance exhibited by the area.

The 37 native taxa observed are representative of the marshlands and sage scrub habitats on site. Unique floral elements include those species restricted to the rapidly dwindling Coastal Salt Marsh vegetational communities, i.e., the endangered Salt Marsh Bird's-beak, and the only known United States occurrence of *Frankenia palmeri*. Also noteworthy are the fragmented occurrences of seemingly intact assemblages of Maritime Succulent Scrub

species, including the depleted *Ferocactus viridescens* and *Opuntia parryi* var. *serpentina*, as well as *Lycium californicum* and *Dudleya edulis*. Sensitive plants are discussed in the Sensitive Biological Resources section of this section.

## Zoological Resources

### General Wildlife Habitat

Major wildlife habitats occurring in and adjacent to the Midbayfront planning area include Coastal Salt Marsh, Freshwater and Brackish Marsh, shallow water and mudflats, and disturbed uplands. Of these habitats, the wetlands and associated marine habitat areas are of principal importance.

#### Coastal Salt Marsh

Coastal Salt Marsh wildlife habitat is coincident with the distribution of salt marsh vegetation (Figure 3-V). These areas total approximately 198 acres and are located adjacent to the northern and southern limits of the Midbayfront subarea. Characteristic species of these habitats include the Belding's Savannah Sparrow, which occurs as a resident in all of the bayfront salt marshes, the Light-footed Clapper Rail, which has recently been recorded only in the Sweetwater and "E" Street Marshes, the Willet (*Catoptrophorus semipalmatus*), the Marbled Godwit (*Limosa fedoa*), the Great Blue Heron (*Ardea herodias*), and the Long-billed Curlew (*Numenius americanus*). The abundance of invertebrates and fish occurring in the marshlands provides ample food for foraging birds, specialized in the collection of these resources. Along the fringes of the marshlands terrestrial mammals, including the Desert Cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), and Botta's Pocket Gopher (*Thomomys bottae*), forage on the lush marsh plants; also present in these areas are the sensitive Wandering Skipper Butterfly (*Panoquina errans*), and four species of Tiger Beetle (*Cicindela hemorrhagica hemorrhagica*, *C. latesignata latesignata*, *C. trifasciata sigmaidea*, *C. gabbi*), of which the latter three are considered sensitive.

Besides providing unique habitat in its own right, the salt marshes of the bayfront provide supporting refuge, foraging grounds, spawning grounds, and nesting habitat for numerous species more typically associated with open water or shoreline areas of the bay and coastal areas. During most evenings and higher tidal periods, the marshlands receive heavy use by roosting and loafing shorebirds, higher portions of the marsh are utilized as nesting areas by such shorebirds as the Black-necked Stilt (*Himantopus mexicanus*). Storm events also force many marine associated birds to take refuge in the calmer marshlands. This point was well illustrated by the extremely harsh December 1987 storm event which forced several thousand birds, predominantly waterfowl, shorebird, and gull species into the "E" Street Marsh and Vener Pond (Merkel, pers. obs.).

The tidal channels, creeks, and even frequently exposed portions of the marshes are utilized as spawning areas and nursery grounds by numerous coastal fish and invertebrates. A diverse and abundant community of resident invertebrates persists in the salt marsh habitats as well. Most notable are the concentrations of California Horn Snails (*Cerithidea*

*californica*), Fiddler Crabs (*Uca crenulata*), and Yellow Shore Crabs (*Hemigrapsis oregonensis*). An abundance of resident bivalves is present, as indicated by the large and diverse deposits of shells and active siphon jets. Castings suggest that marine polychaetes are also abundant; however, no attempt was made to sample or identify these worms.

#### Freshwater and Brackish Marshlands

These marshlands exhibit several characteristics similar to those of the salt marshes; however, the wildlife species assemblage making use of these areas differs sufficiently from that of the classical salt marsh areas to warrant separate consideration. The Brackish Marsh areas of the bayfront support nesting by Marsh Wrens (*Cistothorus palustris*) and Red-winged Blackbirds (*Agelaius phoeniceus*). These areas are heavily utilized by herons and egrets as foraging and loafing habitat. Also present in these habitats are seasonally diverse and abundant waterfowl, including Mallard (*Anas platyrhynchos*), Northern Pintails (*Anas acuta*), Ruddy Duck (*Oxyura jamaicensis*), Cinnamon Teal (*Anas cyanoptera*), and American Wigeon (*Anas americana*). Also present in these areas are Sora Rails (*Porzana carolina*), Common Moorhens (*Gallinula chloropus*), and American Coots (*Fulica americana*). The brackish marshes do not receive regular tidal flushing and thus lack the diversity and abundance of macro-invertebrates and fish found in the salt marsh habitats. Most of the vertebrate species utilizing these areas rely on the seasonal productivity of aquatic plants, including Pondweed and Widgeongrass, as well as the shoreline grasses and reeds. Mammals found in association with these areas are similar to those observed or expected in and around the salt marshes. These include the Raccoon, California Ground Squirrel, and a variety of small rodents.

#### Shallow Water/Mudflats

Shallow water and mudflat habitats present along the bayfront vary greatly in size by a reciprocal relationship. When the tide is low, vast expanses of mudflat habitat are exposed and the area is heavily utilized by foraging shorebirds. Over 30 shorebird species are known to utilize this stretch of shoreline and exposed mudflats in the Bayfront (Table 2, Appendix C). During high tides, gulls, terns, waterfowl, loons, grebes, cormorants, and pelicans dominate the activities in these areas potentially adding an additional 50+ different species to the list. Herons and egrets (eight reported species), along with long-legged shorebirds and several terns and gulls, forage more frequently within the shallow waters between the extremes of exposed mudflat and deep inundation. At the lower reaches of the intertidal mudflats and in the shallow subtidal waters, eelgrass meadows occur near the mouths of each marsh and smaller beds are found scattered along the remainder of the shoreline. These beds provide extremely important habitat to a variety of fish and invertebrates, including juveniles of neritic species. Additionally, these beds provide important forage for a variety of waterfowl including the Black Brant (*Branta bernicla*). The shallows of south San Diego Bay and the associated marshlands are an extremely important stop-over and destination location for migratory species utilizing the Pacific Flyway. The significance of the area to the ecology of migrants is indicated by the vast seasonal fluctuations in both numbers and diversity of species utilizing the Bayfront (Jones and Stokes, 1988).

## **Disturbed Uplands**

Disturbed uplands within the bayfront range from recently disced agricultural fields to abandoned structures and trash piles, as well as maintained buildings and landscaping. The sheer diversity of these areas combined with their coastal location and size have attracted a wide variety of resident and migratory birds as well as an abundant mammalian and herpetofauna. Over 90 upland-associated avian species have been reliably reported from the Chula Vista bayfront (Table 2, Appendix C). Several of these species are not expected to make extensive use of the area and, in fact, records are often more reflective of the attraction of the area to keenly observant bird enthusiasts, than the presence of suitable habitat for the species observed.

Raptors were observed to forage over the open fields, and passerines make use of all aspects of the disturbed uplands. Seed-eating birds including numerous finches (*Carduelis* and *Carpodacus* spp.), Mourning Dove (*Zenaida macroura*), and a variety of sparrows, make use of the fields while insect gleaners utilize the fields, shrubs and trees. The few scattered trees and tall shrubs are important structural elements in the upland habitats, which provide singing, foraging, and sentry points for numerous avian species.

Several piles of debris occur along the shoreline fringes of the Midbayfront and on Gunpowder Point. These junk piles support an abundance of Western Fence Lizards (*Sceloporus occidentalis*). Also common are Southern Alligator Lizards (*Elgaria multicarinata*) around landscaped portions of the bayfront. A particularly noteworthy occurrence is the California Legless Lizard (*Aniella pulchra*) within the finer sandy soils near the shoreline areas of the Midbayfront and Gunpowder Point.

## **Fauna**

### **Invertebrates**

Incidental observations of marine invertebrates were made to help characterize the salt marsh and shoreline marine habitats present in and around the Midbayfront Planning Area. The species observed are reported in Table 2 of Appendix C and represent only a small fraction of the hundreds of macro-invertebrates expected to occur in the mudflat, marsh, and tidal channel habitats present. These observations were limited to the epibenthic organisms and infaunal organisms which were readily identified by sight or remains.

The marine species observed reflect a healthy, vigorous salt marsh habitat. No sensitive marine invertebrates were observed during the field investigations; however, several terrestrial species inhabiting the wetland and wetland fringes are considered sensitive. These species, three species of Tiger Beetle (*Cicindela* spp.) and the Wandering Skipper (*Panoquina errans*), are discussed in the Sensitive Biological Resources subsection.

### **Fish**

Like the marine invertebrates, fish were not systematically sampled, but species observed or reliably reported have been noted and are expected to be representative of the

community present. These fish are listed in Table 2 of Appendix C. No sensitive fish species were observed or are expected to occur within the planning area. Several juvenile fish with commercial or sport fisheries value have been noted within the tidal channels and shallow waters of the adjacent San Diego Bay. These include the California Halibut (*Paralichthys californicus*), anchovy (*Anchoa* spp.), Sand Bass (*Paralabrax nebulifer*), and the Longjaw Mudsucker (*Gillichthys mirabilis*). The high commercial value of the Longjaw Mudsucker as a baitfish at the Salton Sea led to its rapid depletion from marsh tidal channels throughout the bayfront. Only recently has controlled access to the marshlands assisted in its recovery as a dominant resident species.

### Amphibians

Only two amphibians have been reported from the bayfront area (Table 2). The first is the common Pacific Treefrog (*Hyla regilla*). This species is found in the Freshwater and Brackish Marshes of the bayfront. The second species noted is the African Clawed Frog (*Xenopus laevis*). This species was noted to occur in the Brackish Marsh near Interstate-5 during the spring of 1986. The species is strictly aquatic and the individual noted likely represents animals washed downstream from populations firmly established in the Sweetwater River. The site does not support habitat conducive to this species' survival.

Other amphibians expected to occur on site include Slender Salamanders (*Batrachoseps* spp.) and Western Toads (*Bufo boreas*). Because of the marine influence of the wetlands in the planning area, amphibian activities are expected to be extremely low.

No sensitive amphibians are expected to occur on the property.

### Reptiles

Twelve native reptiles and one introduced lizard have been noted within the recent years in the bayfront area (Table 2, Appendix C). Of particularly noteworthy occurrence have been the California Legless Lizards, and the Coast Horned Lizard (*Phrynosoma coronatum blainvilliei*). Both of these species have suffered major population declines due to losses of their coastal habitat. The horned lizard has additionally suffered due to collection pressures. While the legless lizard is expected to occur along the coastal strand throughout the northern bayfront, suitable habitat for the horned lizard is limited to scattered locales further north on Gunpowder Point.

Sensitive reptiles occurring on site are discussed in the Sensitive Biological Resources section.

### Birds

One hundred and ninety-two avian species have been reported from the northern Chula Vista bayfront (Table 2, Appendix C). In general, this high diversity reflects the coastal wetlands aspect of the site. Ninety-five species are found exclusively associated with coastal wetland and open water habitats on site.

Observations of a variety of birds reflect migratory movements of passerines, and incidental transitory occupancy by other species. A variety of the species noted are all but extirpated from the bayfront, although they occur more frequently at interior locations.

Eleven raptors, and four species of owl have been recorded in the bayfront in recent years. There has been an apparent decline in usage of the area by several of these species over the past few years. Notably, these include the Northern Harrier (*Circus cyaneus*), Red-shouldered Hawk (*Buteo lineatus*), Black-shouldered Kite (*Elanus caeruleus*), and American Kestrel (*Falco sparverius*) (Merkel, pers. obs.). These declines are probably related to the reduction of prey including Desert Cottontail, California Ground Squirrel, and Pocket Gophers associated with the more frequent and intense management of field habitats in the Midbayfront. There has been an increase in the activities of the endangered Peregrine Falcon, an event undoubtedly related to the 1989 successful nesting of the species on the Coronado Bridge, the first in San Diego County for over 40 years. Other raptorial birds have maintained an apparently stable level of incidental occurrence in the bayfront region as migratory movements and wide home ranges carry them over the site. Raptor nesting in and around the bayfront is limited to that of the common Red-tailed Hawk (*Buteo jamaicensis*), the American Kestrel, the Burrowing Owl (*Athene cunicularis*), and possibly the Red-shouldered Hawk.

Also nesting in the area are Common Ravens (*Corvus corax*), Scrub Jays (*Aphelocoma coerulescens*), and Loggerhead Shrikes (*Lanius ludovicianus*), three semi-raptor-like species which constitute important predators in the area. Burrowing Owls have been known to nest on the steep banks of the northern portion of the Midbayfront, throughout the disturbed lands on Gunpowder Point (NWR), and on the "D" Street Fill. Efforts to eradicate owl nesting on the "D" Street Fill (NWR), near the California Least Tern Nesting Colony, have been fairly successful, and currently nesting burrowing owls are a fairly uncommon sight in the bayfront (E. Lichtwardt, K. Merkel, pers. obs.). This species is, however, more commonly seen on the Chula Vista Wildlife Reserve Island.

Several sensitive birds occur in and around the Midbayfront Planning Area; these species have been studied widely and inventories provide a fairly detailed account of the distribution patterns of the most sensitive of the birds. The presence of breeding populations of Belding's Savannah Sparrows, Light-footed Clapper Rails, and California Least Terns is of high interest and concern. Also of interest are the distribution patterns of the endangered Peregrine Falcon and California Brown Pelican. These and other sensitive avian species are discussed separately within the Sensitive Biological Resources section.

An additional concern, and one which has not been addressed well in previous studies relates to avian flight patterns within and around the Midbayfront Planning Area. More discussion of this concern occurs later in this section, and in detail in Appendix C.

#### Mammals

Fifteen native mammalian species were detected on the site (Table 2, Appendix C). Of these, all are common to San Diego County. Notable among the native species are the occurrences of the Long-tailed Weasel (*Mustela frenata*), which exist as a breeding pair on

Gunpowder Point. Also of note are the occasional occurrences of large mammals such as the Coyote (*Canis latrans*) and the Gray Fox (*Urocyon cinereoargenteus*). In addition to the native species occurring in the bayfront, five introduced or domesticated species also occupy various areas within the bayfront and its immediate vicinity. These include the naturalized Virginia Opossum (*Didelphis virginiana*), the human-associated Black Rat (*Rattus rattus*) and House Mouse (*Mus musculus*), and the Domestic Dog (*Canis familiaris*) and House Cat (*Felis domesticus*). The introduced species tend to be the most destructive of the mammalian predators present in the bayfront. These species account for the majority of the mammalian predation on avian nest colonies, sites, young, and adult birds throughout the bayfront area.

No sensitive mammals are expected to inhabit the project area.

### Sensitive Biological Resources

The general location of the plant and animal species discussed below are illustrated in Figure 3-VI.

#### Sensitive Habitats

##### Coastal Salt Marsh

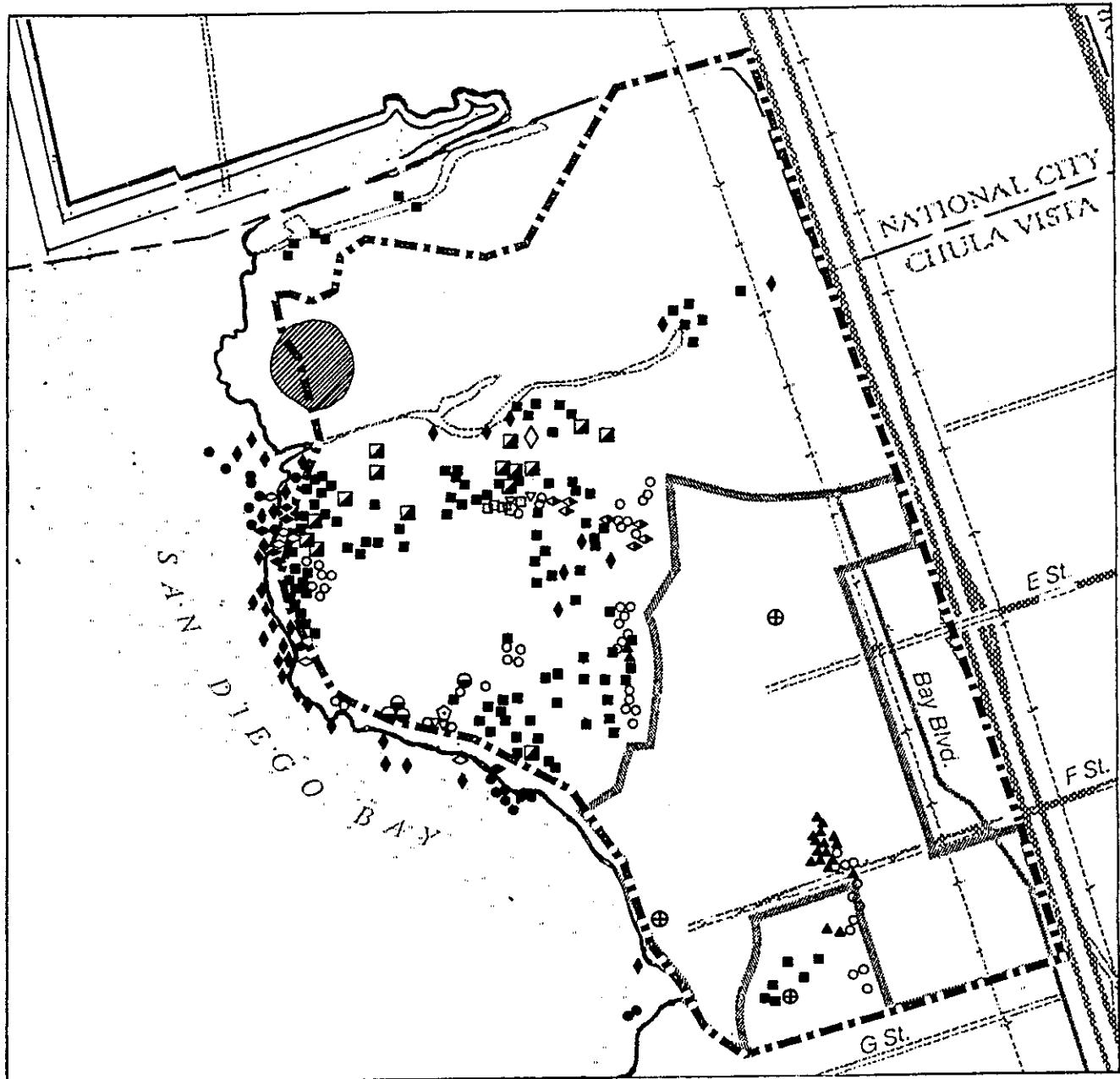
Coastal Saltmarsh communities are naturally limited, highly productive ecological systems which persist at the interface of marine and terrestrial systems in sheltered bays and estuaries. The conditions of intermittent drying and inundation with saltwater create a situation favoring halophytic vascular plants tolerant of frequent inundation and soil anoxia. Such conditions also favor marine algae and invertebrates resistant to desiccation stresses. The regular tidal exchanges of nutrient rich seawater promote high primary productivity and provide the basis for an important detrital based food web.

Saltmarshes are home or provide important habitat to several sensitive species, including several state and federally listed endangered species. In addition to playing host to sensitive species, saltmarsh communities provide important nursery grounds and foraging areas for a host of other organisms including fish, terrestrial and marine invertebrates, and birds. These areas are important to the continued survival of several non-nesting migratory bird species as well, providing food, shelter, and resting habitats.

These coastal wetlands have suffered a tremendous decline in the recent past due to both direct and indirect impacts. Development and agricultural pressures have led to the filling of such areas, marine development has led to the dredging of these areas, and watershed development has led to the introduction of numerous contaminants, modified the erosion and accretion patterns, and greatly altered the freshwater hydrologic character of most coastal wetlands. It is estimated that over 75 percent of the coastal wetlands in the state of California have already been lost and the future of the remaining wetlands is tenuous at best (Marcus, 1989).

# APPENDIX

## RESUMMITAL #8



### FAUNA

- ◆ California Least Tern
- ⊕ Peregrine Falcon
- California Brown Pelican
- Light-footed Clapper Rail
- Belding's Savannah Sparrow
- California Legless Lizard
- Wandering Skipper Butterfly
- ◇ Mudflat Tiger Beetle
- ◆ Sand Dune Tiger Beetle
- ◆ Gabb's Tiger Beetle

### FLORA

- ▽ Snake Cholla
  - Coast Barrel Cactus
  - ◊ Palmer's Frankenia
  - ▲ California Sea-blite
  - ◊ Salt Marsh Bird's Beak
- 
- Least Tern Colony

NOTE: Symbols indicate use areas and are not indicative of populations.

**SENSITIVE SPECIES**

Figure 3-VI



Due to the high value of these systems and the rapid losses they have undergone, almost any impacts to these systems would be considered significant. In addition, in most cases such impacts would be subject to permitting requirements of various federal, state and local entities in addition to the CEQA review process.

#### Freshwater and Brackish Marsh

These habitats are frequently associated with estuarine or drainage systems which receive regular influxes or which capture seasonal and sporadic inputs of freshwater. These areas are often quite productive and provide foraging and nesting habitat for a fairly specific suite of organisms including several species of waterfowl, rails, and a specific group of passerine birds. In addition, these areas are often utilized fairly extensively by several sensitive reptiles.

With the tremendous coastal development which has occurred over the past several years, many of these areas have been lost or highly modified. On site, the small brackish marsh is heavily utilized on a seasonal basis by a host of waterfowl and wading birds. This marsh area, historically a portion of the "F" & "G" Street Marsh, may support literally a thousand or more birds during winter storms (Merkel and Reiser, pers. obs.). Even during non-storm events, the pond may be utilized by hundreds of waterbirds at any given time. For these reasons, impacts to such a resource would be considered significant and adverse.

#### Shallow Water/Mudflats

The shoreline of San Diego Bay, which borders on the property, consists of a wide mudflat meeting a narrow sand fringe and a steep bank. These mudflats are highly productive environments and receive heavy use as an avian foraging and loafing area during low tides. Mudflats, like the coastal saltmarshes, are naturally limited in extent and have suffered tremendous losses due to human activities. In Mission Bay, almost all of the approximately 5000 acres of historic mudflat habitat has been removed to create a recreational embayment. In San Diego Bay, similar losses in the north and central bay have virtually eliminated all mudflats from these areas. Within south San Diego Bay, the wide expanses of mudflat and shallow water, combined with the general low disturbance levels, have created a refuge area for resident as well as migratory birds utilizing the Pacific Flyway.

#### Eelgrass Meadows

Eelgrass Meadows are among the most productive communities in the world. These areas provide the basis for major detrital based food-webs, and are more directly utilized as forage by a number of birds, including the Brant's Geese (*Branta bernicla*) (which is all but an obligatory consumer of eelgrass). While direct grazing on eelgrass is quite common among the waterfowl utilizing the area, a much more intricate and extensive system of trophic links is found between invertebrates, algae, fish, and birds when the structural and secondary substrate characteristics of the bed are taken into consideration. Eelgrass beds are known to be important nursery grounds for fish and macro-invertebrates which return to bays and estuaries to spawn.

The extent of eelgrass habitat present in most areas has declined in the recent past due in part to direct losses as well as indirect impacts of changing circulation patterns, and a general degradation of water quality. While much has been done to curb the loss of this resource to dredging and filling, potentially more significant losses due to declining light transmittance may be on the increase as coastal watersheds are developed and erosion levels within these watersheds multiply.

#### Sensitive Plants

Sensitive plants adjacent to the site are described below. Others located further away in the NWR are described in Appendix C.

##### Coastal Salt Marsh Bird's-beak (*Cordylanthus maritimus* ssp. *maritimus*)

Known Sites: Only two known sites extant: a sizeable population in the Salt Marsh at Imperial Beach and a small group growing in Chula Vista's Sweetwater Marsh. The Imperial Beach population grows in a very precarious location along a commonly used footpath. This site should be better protected considering its Federally Endangered status. An estimated 2000 individuals flowering along Back Bay Road in Newport, Orange County during early summer 1989.

Status: Approaching extirpation

A small colony of this federally-listed Endangered species is extant in the Sweetwater Marsh near Vener Pond. With only two small populations known in San Diego County, the occurrence on site is considered extraordinarily significant.

##### San Diego Barrel Cactus (*Ferocactus viridescens*)

Known Sites: Barrel Cactus occurs at many locales throughout the coastal region.  
Status: Substantially declining. Once very common along the coast, many small and mid-sized populations are routinely being impacted by grading for urban development.

A few plants are still extant on a hummock in the northeastern corner of Gunpowder Point. Elsewhere, near the Visitor Center, are planted specimens which are not native to the site. These cacti are considered of minor biological significance; nevertheless, they provide an indicator of the prior plant diversity surrounding the bay and are important relictual floral elements in the bayfront.

##### California Sea-blite (*Suaeda esteroa*)

Known Sites: Found around the salt marshes of San Diego Bay, as at the "E" Street Marsh in Chula Vista. As it grows on the periphery of marshes it is usually endangered by high recreational use or "creeping" development which tends to build up to the very edges of the marsh, leaving no buffer.

Status: Declining. More information needed.

A buffer around the salt marsh habitat which is rigidly enforced to remove ongoing site degradation (as at the "F" & "G" Street Marsh) would allow additional expansion of this species. *Suaeda esteroa* seems to be presently expanding into peripheral upland areas adjacent to undisturbed areas of Sweetwater Marsh. The population on the bayfront is considered biologically significant for this recently-described taxon.

#### Sensitive Wildlife

Numerous sensitive animals occur or have the potential for occurring within the project boundaries. However, sensitive animals which occur outside the boundaries may be affected by the project. These are discussed, with their sensitivity status and on-site status, in Table 4 of Appendix C. Species warranting additional consideration are discussed below.

#### Reptiles

##### *Coast Horned Lizard (*Phrynosoma coronatum*)*

Status: Depleted due to pet collection and habitat destruction.

This species has been noted during previous surveys in the bayfront, but due to the prevailing disturbed habitat conditions, it is not expected to currently occur or persist at any sort of a viable population level.

#### Birds

##### *California Brown Pelican (*Pelecanus occidentalis californicus*)*

Listing: USFWS (1986) - Endangered  
CDFG (1988) - Endangered  
Everett (1979) - Threatened

Status: This species population density tends to fluctuate with various environmental conditions, such as water temperature and fish abundance. In the 1960s there was a drastic decline along the California and Gulf coasts due primarily to eggshell thinning caused by DDT. Populations have been increasing and, currently, Brown Pelicans are doing well.

The Brown Pelican primarily utilizes the open waters of San Diego Bay and is uncommon in the adjacent marsh itself.

##### *Reddish Egret (*Egretta rufescens*)*

Listing: USFWS (1986) - Category II  
Audubon Blue List (Tate 1986)

Status: This egret is uncommon throughout its range; however, as noted above, it is a regular visitor, in small numbers, to pickleweed marshes during the winter months.

The Reddish Egret is found annually around San Diego Bay during the non-breeding season, with the Sweetwater Marsh being one of the most frequented areas.

#### Light-footed Clapper Rail (*Rallus longirostris levipes*)

Listing: CDFG (1977, 1988) - Endangered  
USFWS (1986) - Endangered  
SDNGWS (1976) - Special Concern  
Everett (1979) - Threatened

Status: The Light-footed Clapper Rail is one of the most endangered birds in the United States with only 277 pairs found in a 1984 survey of California marshes (Zembal and Massey 1985). Recent estimates for the Sweetwater Marsh complex are 5 pairs (Zembal 1989, pers. comm.)

This federally-listed endangered bird occurs in the "E" Street and Sweetwater marshes. It is likely that this bird will begin to be found in Vener Pond as well due to the continuing conversion to saltmarsh. The "F" & "G" Street Marsh has been historically utilized by this species; however, recently, several investigations have failed to locate any birds in this area.

#### California Least Tern (*Sterna antillarum browni*)

Listing: CDFG (1977, 1988) - Endangered, Fully Protected  
USFWS (1986) - Endangered  
Everett (1979) - Threatened

Status: Breeding colonies are limited in extent, and fledging rates are highly variable and recently very low, primarily due to heavy predation from domestic cats, dogs, horses, ravens, crows, and small raptors. Off-road vehicles have also had deleterious effects on the nesting areas.

This species forages over the open water along the bayfront and nests on the "D" Street Fill area (NWR). The Least Tern formerly was a fairly common forager over Vener Pond; however, this pond is returning to salt marsh and the birds are now infrequent here.

#### Northern Harrier (*Circus cyaneus*)

Listing: Audubon Blue List (Tate 1986)  
Everett (1979) - Declining  
Remsen (1980) - 2nd Priority

Status: This raptor has declined as a breeder in southern California due to loss of habitat.

The Northern Harrier frequently forages over the site but does not nest on site, and three nests were reported to occur at Sweetwater Marsh NWR in 1990. Two nests, one in "E" Street Marsh and one in the Sweetwater Marsh, raised a total of five chicks.

#### Peregrine Falcon (*Falco peregrinus*)

**Listing:** CDFG (1988) - Endangered  
USFWS (1986) - Endangered  
**Status:** This falcon has declined as a breeder in California due largely to the use of DDT.

Since DDT has been banned, their number has increased in California (Cade, 1982). Peregrines are frequently observed on the site as migrants. A pair of Peregrines nested this year under the Coronado Bridge and may forage as far south as the site and the salt works. These falcons are often associated with bodies of water and the presence of the Sweetwater Marsh and mudflat areas may attract them to the site as a foraging ground.

#### Snowy Plover (*Charadrius alexandrinus*)

**Listing:** Everett (1979) - Declining  
Audubon (Tate 1986) - Species of Special Concern  
Remsen (1980) - 2nd Priority  
USFWS (1986) - Category II  
**Status:** Uncommon to declining on the coast as a nesting species.

Permanent resident in the area, but probably does not breed on site.

#### Long-billed Curlew (*Numenius americanus*)

**Listing:** Audubon Blue List (Tate 1986)  
USFWS (1986) - Category II  
**Status:** This species is considered down in numbers by many observers; however, it is still a fairly common wintering species along the coast in San Diego County.

Common in low numbers within all of the saltmarsh habitats of the bayfront.

#### Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*).

**Listing:** CDFG (1977, 1988) - Endangered  
USFWS (1986) - Category II  
SDNGWS (1976) - Special Concern  
Everett (1979) - Threatened  
**Status:** The 1986 census estimated 2,274 pairs in 27 marshes in southern California. Eight marshes have populations of 100 pairs or more, comprising 75 percent of the total. The upper marsh habitat is rare in southern California, being the easiest to fill and claim for land uses. Extirpations have occurred in at least 3-4 locations in the last 10 years. Sixty-three percent of the marshes

containing 40 percent of the individuals are in private ownership. Development proposals exist for several of these marshes. Continued planned restoration activities and public acquisition is needed.

One-hundred forty-five pairs are known from the Sweetwater Marsh complex (Zembal *et al.*, 1988); up from 74 pairs found in 1977. With only 2.4 percent of the total marsh area considered, Sweetwater Marsh hosts a density of 2.3 pairs per hectare and 5.2 percent of the state's total number of Belding's Savannah Sparrows. The Belding's Savannah Sparrow inhabits salt marsh areas below the confluence of Nestor Creek and the Otay River. It has also been observed on sparsely vegetated levees within Western Saltworks. Due to the timing and conditions under which the surveys were conducted, no population estimates for this species have been made.

#### **Large-billed Sparrow (*Passerculus sandwichensis rostratus*)**

**Listing:** USFWS (1986) - Category II

**Status:** The Large-billed Sparrow has declined because of the destruction of its breeding habitat at the mouth of the Colorado River in Mexico.

The first influx of this bird in over 30 years occurred in the winter of 1988-89, with up to 14 individuals being found around the mouth of the Sweetwater River (McCaskie, 1989).

#### **Additional Sensitive Wildlife Observed On The Site**

In addition to those species discussed above, a number of other species which are considered sensitive at various local, state, or federal levels have also been observed on the site. These species are either rare on the site and do not utilize the habitat regularly, are only sensitive on their local breeding grounds or are vagrants on the site during migration.

#### **Impacts**

##### **Drainage and Water Quality Impacts**

The proposed project would modify the existing drainage patterns within the Midbayfront, thereby potentially altering the seasonal freshwater input into various salt marsh and brackish water areas. The project would also modify the existing chemical and physical constituents of stormwater runoff entering the wetlands and waters of San Diego Bay from the Midbayfront subarea.

The changes in the Midbayfront watersheds that would accompany the proposed project are as follows:

| <b><u>*Drainage Basin</u></b> | <b>Existing<br/>Acres</b> | <b>Developed<br/>Acres</b> | <b>Net Change<br/>(Acres)</b> |
|-------------------------------|---------------------------|----------------------------|-------------------------------|
| "F" & "G" Street Marsh        | 37.1                      | 14.2                       | -22.9                         |
| Seasonal Freshwater Marsh     | 46.7                      | 96.3                       | 49.6                          |

|                                  |      |      |       |
|----------------------------------|------|------|-------|
| Direct to San Diego Bay          | 22.4 | 34.5 | 12.1  |
| "E" Street/Vener Pond/Sweetwater | 57.4 | 7.6  | -49.8 |
| Internal Drainage to Lagoons     | 0.0  | 11.0 | 11.0  |

\*Information from Rick Engineering 1989a, b; Walter Crampton, pers. comm.; and independent review.

### Increased Freshwater Input

The actual changes in the amount of water flowing through each system are likely to be dramatically different than the basin areas would suggest. Development would create substantially greater amounts of water-impermeable substrate. Thus, where rainwater is currently absorbed by the soft dry ground of the unirrigated agricultural fields and a level of saturation is almost never achieved, the asphalt, concrete and irrigated landscaping of the proposed development will more readily shed water, leading both to more frequent and heavier freshwater runoff conditions than those currently occurring in the Midbayfront area.

Vegetation and wildlife within wetlands can be significantly altered by wide fluctuations in the salinity regimes of the marshlands due to changes in drainage. Further, observations within altered systems indicate that salt marsh habitats can be readily converted to brackish or even freshwater systems through the diversion of substantial freshwater flows into the system for a prolonged period (Merkel and Reiser, pers. obs.).

The proposed project would lead to more frequent and larger pulses of freshwater into brackish and salt marsh areas of the "F" & "G" Street Marsh and the seasonal "Freshwater" marsh to be reconfigured as a detention basin. In addition, a new low-level continuous input of freshwater originating from irrigation runoff, automobile washing, street and sidewalk cleaning, etc. will occur. These changes in the hydrologic regime of the Mid-bayfront will probably result in seasonal reductions in soil salinities beyond those which normally occur, thus triggering seedling germination and growth of salt marsh as well as fresh and brackish marsh species. Once established, several species which would not normally occur in the saltmarsh system may persist and can thrive during future periods of reduced salinity (Beare and Zedler, 1987). Continuous influxes of freshwater to the system may result in the expansion of the freshwater and brackish systems at the expense of the salt marsh system. Additionally, such inputs promote the invasion of wetlands by weedy species which are introduced by seed to the low salinity areas surrounding storm drain outlets.

While large increases in the freshwater input can be detrimental to the existing saltmarsh systems in the bayfront, the reduction in such inputs may be equally, if not more devastating. Many of the marsh plant species require reduced salinity for seedling germination and rapid growth (Purser, 1942; Zedler *et al.*, 1980, 1984, 1986; Zedler, 1986; Beare and Zedler, 1987; Zedler and Nordby, 1986; Zedler and Beare, 1987). For this reason, the loss or reduction of freshwater input is likely to lead to a gradual shift in the marshland structure as older plants senesce and seedling recruitment is skewed towards one or a few species with germination potential at high salinity levels. This shift could lead to major disruptions of the system and the eventual collapse of major system links. Shifts in predominant vegetation could make the marsh unsuitable to avian nesting, as well as foraging uses. Further, the

changes in cover species would be likely to lead to increases in predation, a shift in the invertebrate and fish community, and changes in subordinate plant distributions, thus accelerating the homogenation of the marsh.

Within the "F" & "G" Street Marsh, slight increases in pulse type freshwater influxes of a short-term and seasonal nature could, in fact, be quite beneficial to the system and particular species which gain a recognizable benefit through increased system diversity or through the promotion of certain vegetational characteristics. Pacific Cordgrass (*Spartinafoliosa*) growth and seedling establishment is promoted by lowered soil salinities associated with such seasonal pulses (Zedler *et al.*, 1984; Zedler, 1986). This vegetation is highly favored as habitat by the endangered Light-footed Clapper Rail (*Rallus longirostris levipes*) (Jorgensen, 1975; Zembal and Massey, 1980; Massey *et al.*, 1984), a species previously found in the "F" & "G" Street Marsh, but which has since disappeared from the site (P. Jorgensen, pers. comm.). Additionally, such storm flow pulses assist in purging the marsh system of detritus and other litter and debris thus opening up new substrates and removing deleterious accumulations in marsh flats and tidal channels.

The extent of impacts which might be associated with the increase in freshwater input into the Midbayfront wetlands cannot be estimated with a high degree of accuracy. The ratio of landscaping and parklands to hard surface structures, the extent of exposed soil saturation and irrigation runoff, and the prevailing weather patterns will all influence the frequency and amount of freshwater input to the wetland systems.

Design measures proposed in the LCPR and discussed in EIR Section 3.2 provide for construction and maintenance of a detention basin which provides (1) retention of unseasonable summer flows and (2) detention/desiltation of winter storm runoff with ultimate discharge to the marshlands through a created freshwater/brackish marsh wetlands system located adjacent to the existing "F" & "G" Street Marsh. This design requires seasonal maintenance in the form of opening and closing gates. Based on the design and maintenance information provided in the LCPR, potentially significant impacts of freshwater drainage to the "F" & "G" Street Marsh would be mitigated by the proposed drainage plans.

Drainage directly to San Diego Bay from the site would occur at two points. These discharges would conduct site runoff through silt/oil/grease traps and discharge onto a riprap apron placed in a narrow fringe beach at the top of the existing mudflats. The flowline of the discharge pipes would be at 3.9 ft. MLLW. These pipes, unlike the detention basin, lack storage capacity for summer nuisance flows. For this reason, a more-or-less constant flow of freshwater would be released onto the mudflats during low tides. The resulting effects of this release would be changes in sediment characteristics and a shift in the character of the invertebrate community associated with these areas [including a lowering of the infaunal diversity (Zedler and Nordby, 1990)] and a potential significant adverse change in the habitat suitability as a foraging area for shorebirds.

The impact area associated with these discharge points is unknown and would be difficult to determine even after construction due to the considerable monitoring and testing that would be required. However, the affected area generally would be limited to a gradually widening fan below the discharge points. Because of the gentle slope of the mudflat and

the fairly high wave action experienced by this area, the impacted area will be larger than would be expected in steeper more stable areas where erosion would soon create a defined non-circumferential channel. It would be expected that the area would generally broaden from the width of the energy dissipating apron to a much wider and more diffuse deltaic region farther down the mudflat. The total lengths of mudflat below the apron area expected to be affected are 1,200 feet at the northern discharge and 620 feet at the southern discharge point. The apron area, which is expected to be directly impacted by fill material would be approximately 57 feet long and 60 feet wide at the bayward end of the northern discharge. The smaller southern rip-rap apron would be approximately 48 feet long and 50 feet wide at the terminal end (based on USDA-SCS standards which are proposed for use in design of these aprons).

Based on the "best-guess" assumption that the affected area would widen at a 10 degree angle from the end of the apron as water runs down the mudflat, the total mudflat area anticipated to be affected would be 3.3 acres (2.5 acres at the northern discharge and 0.8 acre at the southern discharge). It should be recognized that not all values would be lost from these portions of the flats and that the vast majority of current habitat usage by avifauna and fishes would be expected to continue. Generally low resource values would be limited to a much narrower, frequently meandering, low-flow area with larger impacts being limited to periods when high storm discharges corresponded with low tides.

Two potential measures are available to mitigate these drainage impacts: (1) reducing the impacts to a one time short-term loss by extending the pipes out past the mudflats and replacing sediments over the pipeline; or (2) replacing lost long-term resource values by creating suitable compensatory habitat elsewhere in the southbay region.

The approach recommended in this situation would be to extend the drainage pipes into deeper water and restore the mudflat and eelgrass areas impacted by construction. This approach would have a greater short-term loss but would ensure no long-term impacts to the mudflats and would additionally eliminate potential sedimentation and erosion impacts to eelgrass habitats located below the mudflats. Such measures would require excavation of a narrow trench through approximately 1425 linear feet of mudflat and soft bottom shallows at the northern discharge and excavation of a 670 foot long trench at the southern alignment (Figures 6a and b). Due to the instability of the sediments in these areas, trench walls would probably require stabilization during construction. Suitable bedding materials and pipes would be placed in these trenches and the pre-project contours would be restored using the material removed from the excavation. Impacted mudflat would be expected to rapidly recover and impacted eelgrass would be replanted over the pipeline in the areas from which it was removed.

For reasons of cost and inconsistencies with existing federal permits, the proposed project has not incorporated this measure into the development plans. As an alternative to this proactive mitigation, the project proposes post-development monitoring of the discharge points following completion of the drainage facilities. The outfalls would be monitored for a period of 5 years to determine the extent of any adverse effects. If impacts were identified, action would be taken to rectify or mitigate these problems. Following the

correction of the problem, a similar monitoring period would be required to confirm success of the project.

This approach inappropriately delays action and would be expected to result in a considerable period of "lost value." If drains are to be located at the top of the mudflat, it is essential that mitigation for impacts be provided on the basis of expected effects rather than delaying until impacts have occurred. Appropriate mitigation for these losses would be creation of replacement eelgrass and mudflat habitat which replaces the functional values of that being affected. In that the extent of these impacts is unknown at this time, the conservative approach is to create an equivalent amount of habitat as that anticipated to be affected (3.3 acres) within a suitable mitigation site. Because such an extreme effect is unlikely, a replacement of values would more appropriately be the creation of similar habitat totaling one half (1.7 acres) of the identified area of potential effect. Such mitigation area should be readily accessible to the avian species which would normally make use of the impacted areas. For this reason, sites on the "D" Street Fill or Gunpowder Point would be most appropriate for this purpose.

The inclusion of either of these mitigation measures into the proposed plan would result in reducing the adverse effects of freshwater input to the mudflat areas to a less than significant level.

Based on the information at hand, impacts of increased freshwater discharge are considered significant and mitigable. Several key concerns may be addressed by design considerations which will alleviate non-seasonal freshwater inputs, maintain and potentially enhance seasonal freshwater inputs, and provide for overall maintenance of the marsh systems. These mitigation measures are discussed at the end of this subsection.

#### Contaminant Discharge

Identified with the development of residential, commercial, or other human high-use areas is a corresponding increase in the usage of automobiles, fertilizers, pesticides, and other human-associated practices and products. As mentioned, development provides inherent features which will create a greater amount of freshwater runoff into the marsh. This increased runoff further provides effective means to transport any human-associated byproducts into the marsh. In addition, groundwater pumping has been proposed to sustain the water levels within the project lagoons. Due to the agricultural uses of the site and the various concerns over fluctuations in the saltwater wedge which may result in varying salinities, additional contaminants and freshwater issues may result from this factor as well. Not enough information is available at this time to analyze this issue as it relates to biological resources.

Gasoline and petroleum residues, particularly from automobiles, etc. are found associated with streets and residential areas. These products are typically not derived from a large, accidental spill but rather accumulated through a slow and regular process of vehicle engine drippings and occasional very small spills by residents performing automobile maintenance or disposing of waste oils. Such street oils are typically composed of the less toxic fractions of fuels, as the more toxic aromatic fractions vaporize very quickly. Nevertheless, the level

of disturbance caused by such chemicals is considerable, and the amounts produced under the given conditions as well as the long periods of time required to de-toxify these materials warrant thorough consideration.

The fact that these chemicals are not easily broken down, and further, that they are not water soluble, allows these products to persist in a more-or-less original state as they are transported by freshwater runoff to the marsh. Once in the marsh there can be a very wide range of effects of these pollutants upon resident organisms. These effects range from behavioral responses such as emigration from, lack of immigration to, or modified utilization of polluted areas; to reduction of growth rates and reproductive success including decreased fecundity, increased size or age of sexual maturity; increased susceptibility to parasitism or disease; and in the extreme case, death of respective organisms, species, and/or replacement of representative dominant species by more pollutant resistant species. Hydrocarbons have been identified as effective inhibitors of chemoreceptors which may further inhibit organisms' abilities to locate food, detect predators, or identify potential mates.

The use of fertilizers and pesticides by local residents also holds potential for altering the diversity and abundance of the organisms occupying the marsh. Fertilizers supply one or more nutrient sources which are normally limiting to maximum plant growth; typically nitrogen (in the form of nitrate, nitrite, ammonia, or urea), phosphorus (in the form of phosphate), sulfate, "B" vitamins, and trace metals. The consequences of these excessive nutrients entering the marsh will be an accelerated eutrophication of the system. Under minimal input conditions, there would be a promotion of the growth of plants in excess of that which would be possible under the normally nitrogen-limited conditions prevailing within the marshlands (Zedler, 1986). In an extreme case, at night, during the so-called 'dark phase' of the photosynthetic cycle, oxygen levels in the water can be so reduced that a massive die-off of the fish and invertebrates results. The large amounts of decaying organisms also promote excessive bacteria growth which further imbalances the marsh habitat.

Another possible consequence of the influx of excessive nutrients into the marsh is that it may allow plant species, which would normally be unable to compete with the normal environmental dominants, the ability to out-compete and displace resident species. A change in the flora would result in the alteration of the representative fauna inhabiting the marsh. Many organisms are intricately tied to a particular plant for food, shelter, or to fulfill requirements for reproduction. Loss of a particular plant or suite of plants may therefore foster the elimination of the expected fauna of an undisturbed marsh system.

Influx of pesticides into the marsh through freshwater runoff can also have devastating effects on the marsh community. The effects can be manifested in the outright death of organisms or in sublethal effects such as loss of reproductive success. While the historic examples of DDT on avian reproduction are unlikely to be repeated, they remain classic examples of the potential hazards which must be investigated in order to prevent future potential disturbances. This may be difficult because often there is not adequate testing to ensure short term exposure levels are safe to potentially affected species, and data concerning the effects of long term exposure or bioaccumulation of contaminants in predator species are even more lacking.

The fertilizers and pesticides used today are generally safer in terms of their consequences to untargeted species. Application methods have advanced to the point that qualified horticulturists use them more safely than in past years. Used properly, there is generally a low likelihood of such compounds reaching the marsh in quantities which could prove significantly deleterious to wildlife, or to the point where the balance within the marsh might be upset.

Control over the accumulation of oil residues on streets is not something within the immediate control of the developer, however, prevention of their spread into the marsh can be accomplished by the use of oil traps at points immediately prior to the inflow of runoff into the marsh. These traps can be effective at screening out oils which float on the surface of runoff. Other wastes, including paper, plastic, and other human-source debris can also be effectively removed from the freshwater runoff and thereby prevented from reaching the marsh. Once in the marsh, this trash could persist for long periods of time, interfering with the normal activities of organisms within the marsh. Of utmost importance to the effectiveness of these oil and debris traps is their maintenance. Regular and as-needed maintained maintenance is required; otherwise, the traps will fill, grates will clog and their effectiveness will be lost. This is particularly the case during times of severe storms when rapid and massive runoff brings large amounts of debris which quickly eliminates the effectiveness of the traps.

~~Since the potential for contaminant discharge cannot be estimated at this time, this impact is considered to be significant and unmitigable.~~

While the extent of contaminant generation that will occur from the development area is unknown, the effects of these contaminants on adjacent wetland resources may be effectively mitigated by controls on generation and release to wetland areas. To mitigate the potential adverse effects of contaminant discharge, several drainage features have been incorporated into the project development plan (see Section 3.2). Recent design and maintenance standards have been provided by the project applicant as a commitment for incorporation into a water quality management plan to be developed at a project level. The requirement for developing a water quality management plan at the project level has been incorporated into the required mitigation measures. In addition to the structural amenities such as sediment/grease/oil traps discussed at 3.2, the project includes maintenance standards for the various drainage facilities and standards to control contaminant sources. These measures include:

#### **Facilities Maintenance**

- Monthly street and parking lot sweeping
- Monthly inspection of sediment/grease/oil traps
- Regular cleaning of traps in October and March/April and on an as-needed basis

## **Contaminant Source Control**

- Development and implementation of a project-level landscape chemical management plan which would require:
  - a. the minimal and controlled application of fertilizers, herbicides, and pesticides within the project area
  - b. landscape runoff control measures
  - c. use of state-certified applicators only
  - d. use of short-lived EPA-registered approved chemicals for use near wetland areas
- Inclusion of native low-water use vegetation buffers along project boundaries in locations with sheet flow drainage off of the site
- Development and implementation of a project-level water quality monitoring program which would include:
  - a. a specification of the water quality parameters to be examined
  - b. an identification of the frequency of measurement and locations of sampling sites
  - c. identification of equipment to be used and reporting procedures to be followed
  - d. a commitment to take appropriate corrective measures should a problem be identified
- Development and implementation of a monitoring program for mudflat areas located below storm drain discharge points which would include:
  - a. requirements for approval of the ACOE, USFWS, NMFS and CDFG
  - b. monitoring for water/sediment contaminants
  - c. monitoring of sediment grain size characteristics
  - d. monitoring of erosion activities
  - e. identification of corrective measures should impacts occur

The incorporation of these measures *do could* provide adequate assurance at a plan level that water quality impacts will be mitigated to a level of less than significant. During the project level environmental review, final plan documents responding to the site specific layouts will need to be examined. For ease of use and reference, these various management plans (facilities maintenance, landscape chemical management, water quality monitoring, and mudflat monitoring) should be incorporated into an overall Chula Vista Bayfront, Environmental Management Plan document.

## Sediment Accretion and Erosion

As indicated, the proposed project will greatly alter the existing drainage patterns and surface flow volumes within the Midbayfront. These changes could potentially lead to increased erosion within the uplands and accretion of sediments within the lowland basins, wetlands and discharge areas of San Diego Bay.

While sedimentation and erosion are natural occurrences and even requirements for the development of coastal salt marsh systems, the rate of sedimentation experienced by coastal

systems has been drastically altered by human activities within the associated watersheds. Agricultural activities, urbanization, stream channelization, and construction activities have all served to increase erosion and sediment transport rates throughout the drainage basins feeding coastal wetlands. This increased rate of erosion has led to a consequential increase in the sedimentation rates within the alluvial portions of the drainage system. These areas are characteristically the wetlands. Deposition of sediments within coastal wetland areas has been identified as a critical problem in numerous portions of southern California. Sediment accretion within coastal systems can be rapid or gradual. During major storm events, sediment can literally smother marsh vegetation and completely alter the character of the surface sediments, including changing the sediment salinity, grain size, and organic consistency. These changes can modify the entire infaunal community within the inundated areas (Marcus, 1989).

In addition to having dramatic effects on the marshlands, such heavy sedimentation can have devastating impacts on shoreline resources as evidenced by the loss of eelgrass beds in San Diego Bay following a rapid accumulation of 4-8 inches of sediment (Merkel, 1989b). Other studies have indicated that sediment transported onto mudflats from storm events can significantly alter the foraging regimens of shorebirds (Quammen, 1982), and the distribution and community structure of infaunal and epifaunal fish and invertebrates (Merkel, 1984, 1989a; Dexter, pers. comm.; Woodin, 1974). Resources can further be impacted by suspended sediments which elevate the turbidity levels of the water column, thereby inhibiting photosynthesis in marine algae and seagrasses, and interfere with the respiratory and feeding ability of filter feeding and suspension feeding organisms.

The proposed project will require substantial grading, excavating and dewatering. These activities have the potential for creating considerable erosion within the uplands, and sedimentation/turbidity in the wetland and nearshore marine systems. Further, ongoing operations of the drainage system and saltwater intake and discharge systems are likely to result in creation of localized changes in sediment character, creation of minor silt plumes, and erosion of the mudflats at outfall discharge pipes. All of these factors would be expected to stabilize at a low level with time. However, depending upon the extent of surface drainage and the contaminant loading of the system, several significant changes may occur in the Midbayfront wetlands and coastal environs. Drainage channels from discharge pipes would create unique sediment conditions favoring organisms which occur in finer sediments and lower salinity environments. During winter months, the drainage channels may be converted to areas dominated by larger grained sediments and near freshwater conditions. Eelgrass habitat may be lost due to erosion of the primary substrate or creation of unsuitable depth, turbidity, and salinity conditions. Classical mudflat habitats will be modified.

~~These changes would be considered significant and adverse in nature. These impacts may be mitigated through structural, design, and operational activities and restrictions. These measures are discussed at the end of this section.~~

The effects of the project on sedimentation and erosion patterns are considered significant and adverse but are limited to concerns over mudflat and eelgrass habitat areas. As discussed in great detail in the preceding section on freshwater input, two potential means

of mitigating these impacts to a less than significant level are available and the methods outlined in the prior section would adequately address this issue as well. Again, it would be recommended that storm drains be extended to deeper water as opposed to habitat replacement in other areas, however, either mitigation method is adequate to address the concerns.

### Construction Impacts

The construction phase of the proposed project has the potential for the greatest impacts to the natural systems, is likely to lead to the most rapid changes in sediment transport, and has the highest potential for effecting a change in the local water quality as it relates to biological resources. Such changes have already been discussed and include increased potential for changes in the erosion and accretion patterns, potential for elevated turbidity levels in the bay, and potential for releases of toxins from the construction area into the surrounding wetlands. ~~The potential construction associated impacts are considered significant and mitigable.~~

Mitigation of construction impacts is possible through implementation of effective runoff control measures. Several of these measures have been incorporated into the LCPR (I.H. Utilities and Area Wide Grading, pg. II-80-87) or in standards recently provided by the applicant. These measures include the following requirements:

- provision of flagging and temporary fencing where appropriate to control access to sensitive areas and buffers
- establishment of temporary catchment basins, sediment traps and erosion control measures in all work areas
- installation and maintenance of silt fences where appropriate at the construction site
- use of energy dissipating measures at the outlets of any temporary storm drains
- stabilization of all denuded soil with protective mulch and seeded annual grasses
- use of filters to clarify water leaving detention basins prior to returning to natural wetland areas or the waters of San Diego Bay
- prohibition of grading or construction activities within 200 feet of any wetland or mudflat area from March 15 through August 31, unless approved by the USFWS and CDFG

In addition to these measures it is important that construction dewatering effluent be directed into a desilting basin with a filtered standpipe drain or a filter-fabric and gravel leach system so that clear water is released from the basin. As an alternative, construction dewatering effluent should be pumped across the mudflat into the deeper waters of the boat

channel and discharged at a point above the bottom, to avoid resuspending bottom silts, but at a depth of at least 8 feet.

Implementation of these measures would adequately reduce the potential effects of construction activities on biological drainage issues to a level of less than significant.

### **Wildlife Resources Impacts**

The proposed project would alter the bayfront character in a variety of ways, including increasing human presence in the area and converting habitat areas. Approximately 135 acres of open field habitat will be converted to urbanized areas and a 10-acre salt water lagoon (internal reflecting pond considered as urbanized area). Tall buildings as well as shorter-statured structures and parklands are to be situated over the bayfront uplands, isolated from the majority of the wetlands by a buffer zone (of a not less than 100-feet width) marking the boundary of the National Wildlife Refuge. The exception to this buffer width is land around the "F" & "G" Street Marsh where existing encroachment from the south provides no buffer and east of the Marsh where a 50-foot buffer is provided under existing federal permits. To the north of the "F" & "G" Street Marsh "F" Street is separated from the Marsh by extensive upland fill which is to be removed and restored to wetland habitat.

### **Avian Flight Patterns**

The proposed Midbayfront development includes structures which would rise in excess of 200 feet above the existing topography of the bayfront. Eight structures would rise over 100 feet above the existing ground level and 12 ~~14~~ buildings would not rise over 50 feet above the existing topography. For all other practical purposes the remainder of the inner bayfront regions would not exceed 25 feet in height with street and parking lot lighting, low buildings, landscape trees, etc. Outer portions of the bayfront are designated as parklands in most areas and structural elevations are typically lower, more diverse and designed in a more flexible lay-out.

The Midbayfront is geographically a wide peninsula of land which protrudes into the Sweetwater Marsh complex. The site is bounded on the north by the Sweetwater Marsh and Vener Pond; on the west by Vener Pond, "E" Street ~~Marsh~~, and the shores of San Diego Bay; and to the south lies the "F" & "G" Street Marsh and the Seasonal Freshwater Marsh. This peninsula arrangement as well as the location of the Midbayfront between heavily utilized coastal wetlands and the inland lakes, ponds, fields, and even the dump that attract waterbirds of various sorts from San Diego Bay, makes avian flights and the issues of associated collision or disruption of corridors a reality of the area. The level, location, and species comprising the avian traffic over the site are important components in determining whether the proposed project will disrupt avian flight patterns and the significance of any disruptions should they occur.

~~These issues were evaluated in an intensive study conducted at the site over a seven month period (Appendix C). The species considered in these investigations included all water-associated birds such as gulls and terns, wading birds, large and small shorebirds, waterfowl~~

~~and rails, etc. Also included in the studies are raptorial birds (hawks, eagles, and owls) including corvids.~~

To evaluate these concerns, an avian flight study was conducted at the Chula Vista bayfront (Appendix C, Section II). The study sought to identify the patterns of flight activity of water-associated birds including gulls, terns, wading birds, marshbirds, large and small shorebirds, and waterfowl. Also examined in the study were raptorial birds (hawks, eagles, and owls) including corvids. The goals of this study were: (1) to identify current flight activities and patterns within the proposed Midbayfront development area; (2) to identify the level of bird flight interruption which might be expected to occur as a result of building intrusion into various flight patterns; and (3) to evaluate the effects of these interruptions with respect to potential bird collisions and loss of habitat utilization.

The first goal of the study was achieved by monitoring bird flights over a seven month period and documenting flight activities, patterns and elevations for various species and groups. Information was used to determine both a numerical distribution of flight activities for various bird groups and to prepare a graphic representation of flight patterns of birds over the Midbayfront study area (Figure 3-VI-A).

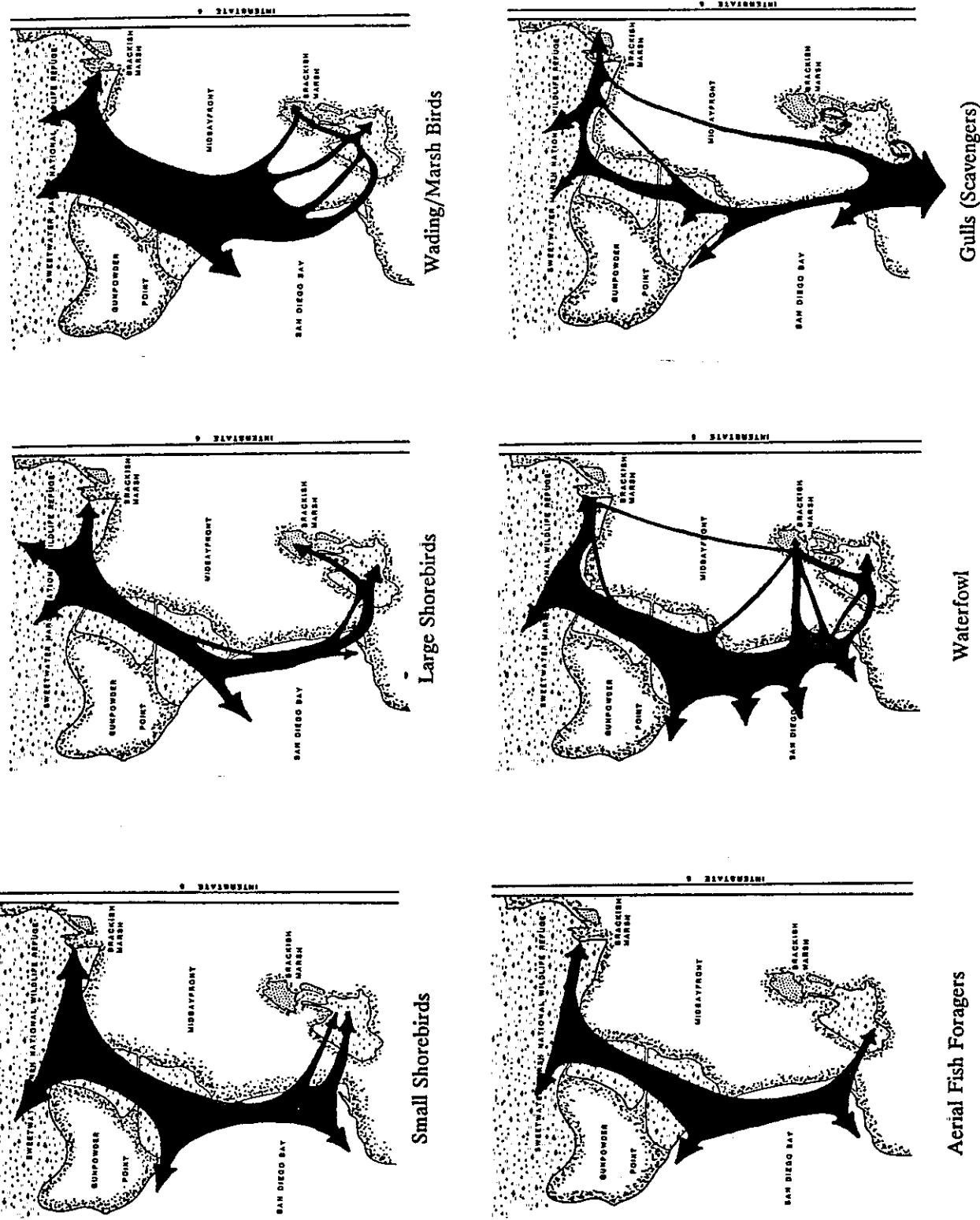
The avian studies indicated that waterbird flights in the Midbayfront were found to be generally restricted to low altitude movements over wetland habitats. While variations between species and behavioral/morphological groups occurred, such patterns of movement were strongly maintained between ~~highly conserved across~~ groups. The most notable exception to the flight activity patterns within the groups monitored occurred in raptors whose movements were predominantly associated with foraging activities over the open fields, and gulls which made high elevation diurnal movements to and from the inland reservoirs, landfills, and agricultural areas, a pattern repeated throughout the southbay region.

~~With the exception of the activities of raptors and broadly defined gull flight corridors, building height and placement were not found to be issues with respect to avian flight activities or the disruption of flight corridors.~~

By overlaying the flight data on the project plan and alternative designs it was possible to calculate an expected incidence of co-occurrence of buildings and birds within any given 3.7 acre square at various elevation ranges (referred to as a "cell" in these discussions). In making these calculations, the most conservative approach was taken to identifying these conflicting areas (i.e., when any portion of a grid and elevation range would be occupied by a building, the entire cell was considered to be impacted by the building). This approach was necessary since a calculation of impacts on the basis of proportion of grid or elevation range occupancy may have underestimated true co-occurrence since flight activities were not randomly distributed within any given cell. This conservative approach, therefore, often resulted in a substantial over-estimation of the true incidences of potential co-occurrence. Furthermore, it was possible to determine the theoretical number of collisions that would occur without considering the physical senses or navigational abilities of the birds; i.e., it was assumed that every bird flying on a collision course with a building would stay on course and collide with the building. However, even under these extremely conservative assumptions,

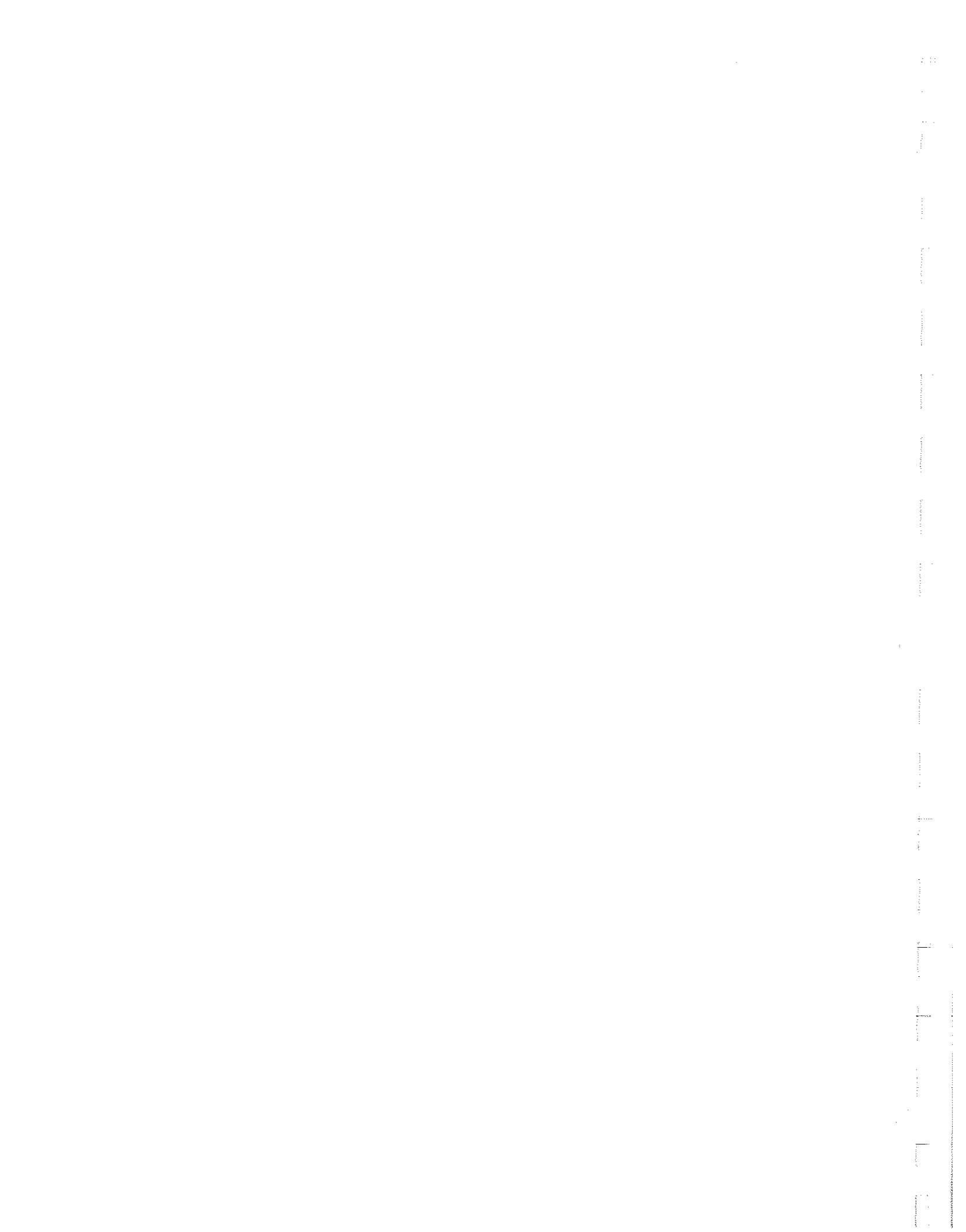


# #ΓΔΗ-ΖΒΣΤΩΓ



AVIAN FLIGHT PATTERNS IN THE MIDBAYFRONT

Figure 3-VI-A



impacts to all waterbird flights, when evaluated relative to the total flight activities within the study area, rarely exceeded 5 percent of all flights.

To factor more realistic features into analyses of bird behavior, an extensive literature review was undertaken to determine how birds truly acted around various structures. The literature review examined all relevant data, however, waterbird and raptor activities were specifically targeted. From studies which empirically examined avian collision rates with existing structures, it was determined that in a worst-case situation where buildings of the proposed development were assumed to have the same likelihood to result in collisions as transmission lines, only 0.06 to 0.002 percent of the 0.5-6.7 percent of the "impacted" avian flights in the study area would be expected to result in collisions (excluding raptors and gulls) (Meyer, 1978; Willdan Assoc., 1981, 1982 as cited in Section II of Appendix C of the DEIR). Based on these analyses, only 1 to 400 flights in every 10 million would result in avian mortality as a result of collisions with structures in the Midbayfront. This rate of mortality was calculated under assumptions that entire grid cells would be impacted by buildings, even though buildings occupy only a minor portion of the cell, and that prominent buildings would have the same collision probability as transmission lines.

Waterbirds observed during the study period showed a strong proclivity for flights along wetland and wetland fringes. The vast majority of the flight activities observed in upland areas was a result of birds cutting across narrow peninsulas between marsh areas. Some bird species and groups were more likely to make these overland flights than others, however, it appears that when such flights over uplands are made they are a matter of convenience rather than necessity. The exception to this consisted of flights made to upland fields by Killdeer, raptors and the broadly defined flights of gulls to inland waters, landfills, and fields.

In the case of raptors, building placement is considered secondary to the loss of foraging habitat usage which would result from development of the site and general human encroachment. This point is discussed in a later section of this document. Because of the overriding issue of habitat unsuitability for raptors under developed site conditions, the impacts to raptor flight activities is not considered to be significant.

In the case of gulls, flight patterns appear to be regional in nature and not specific to any set corridors. Further, numerous studies have cited the structure avoidance behavior of gulls wherein they tend to fly around or rise over impediments. Further, collisions with structures by this group have been reported to be extremely low. For this reason, impacts to gulls are considered to be insignificant.

Based on the results of this investigation, the effect of buildings on avian flight activities would be the minor adverse modification of incidental flights over upland areas rather than a modification of primary flight patterns. In as much as flights along these courses are not the rule but the exception, and are generally goal-oriented movements between foraging or loafing areas rather than activities dependent upon the habitats traversed, no impacts to waterbird use areas are expected to be associated with the limited disruption of flight patterns. Such effects are considered to be cumulatively adverse but less than significant.

As cited in the flight study document (Appendix C, Section II) it should be noted that on a national level it is estimated that avian mortality directly associated with human activities (including hunting) accounts for less than 3 percent of all avian mortality on an annual basis and approximately 1 percent is related to collisions with man-made objects. The vast majority of reported collision incidents come from the eastern and central United States. Of these, avian losses associated with the "hundreds of millions of kilometers of communication (and transmission) lines . . . may represent the largest source of avian mortality" (Avery, 1979). Where structures are concerned, the vast majority of the collisions reported are associated with passerine families and not waterbirds, even though some of the most threatening of structures, such as powerplant cooling towers, are frequently built right on the waterfront (see Avery et al., 1980).

Collisions with structures have been reported to be extremely low for all groups of waterbirds and raptors. However, the use of reflective glass on large windows has been noted to lead to an inflation of the mortality of numerous bird groups, including a host of waterbirds, as a result of the tendency for glass to resemble open sky or water. Because of this, sites located adjacent to a considerable concentration of birds, highly reflective water, and structure orientation towards the west, could foster quite significant collision impacts if reflective glass were used on the buildings. ~~In the absence of such reflective materials, impacts would be insignificant.~~

To address this concern Midbayfront building design standards have been developed for inclusion in the LCPR and are to be used in the design of buildings. These design criteria call for the following building considerations:

- use of non-reflective glass on all building faces with the exception of the east faces of structures
- use of downward tilted windows
- use of architectural detail to inset, shade or otherwise obscure windows facing wetland areas
- minimization of large picture windows
- preclusion of glassed-in corridors or other arrangements which suggest open flight corridors

In addition to these requirements, reflective glass on east-facing windows located above the second story should be precluded. With this inclusion, impacts to avian flight patterns would be considered less than significant.

#### Human/Pet Presence Effects

The construction and continued presence of a complex as large as the proposed project could have dramatic, negative impacts on the quality of the adjacent wildlife preserve and seriously decrease the use of the area by nesting and foraging avifauna.

Although the present agricultural use of the development site is not a direct benefit to most of the water-associated birds in the marsh, the restricted access to the area and the presence of many weedy plant species along the periphery of the flat, open fields, indirectly benefits the birds by allowing unrestricted movement between foraging areas and providing a buffer to human associated activities. It also provides many species such as the Belding's Savannah Sparrow with forage (seeds) and cover.

Development of the area will reduce the shoreline buffer zone and make the wildlife area more prone to the long-term impacts of successional habitat dynamics. Large stands of habitat can withstand minor perturbations and still sustain a population which is large, healthy, and diverse enough to ensure the long-term survival of the species in the area. Deleterious edge effects and fragmentation caused by roads and residential development in such areas can make some species much more vulnerable to local extinction (Soulé & Wilcox, 1980).

The presence of a large number of people in the area could eventually lead to site degradation by humans and their associated pets, primarily domestic dogs and cats, which inevitably find their way over, through, and under even well-tended and mended fences. In similar habitats on Delaware Bay researchers found that only 30 percent of the shorebirds present remained undisturbed on a beach when human activity was allowed. In areas where activity was persistent, birds were found to be less impacted than in areas where activities were inconsistent or erratic (Burger, 1986). Dogs not only flush birds along shorelines, but are also prone to swimming or wading to otherwise isolated nesting areas and can destroy nests. Secretive rails are very sensitive to human presence and, if not killed, will leave a site if disturbed regularly. Such is likely to have been the case at the "F" & "G" Street Marsh (Jorgensen, pers. comm. 1988). In the bayfront, it is not uncommon to see persons with multiple dogs turn their animals loose to chase birds. Signs are only a partial solution since dog owners have been observed on multiple occasions to set their dogs over the posted, least tern colony fence on the "D" Street Fill, while active, and climb over to jog the periphery of the site. Feral dogs and apparently abandoned animals are also quite common in the bayfront area.

Domestic cats have been found to be major predators in some suburban residential areas. Clearly, this is one adverse effect of residential development that could have a significant impact on the birds of the Sweetwater Marsh complex; of particular concern would be small shorebirds, the Belding's Savannah Sparrow, and juveniles of all species.

Residential or recreational development in the area will increase the likelihood of illegal entry, vandalism and habitat degradation of the environment by adults as well as children. Illegal off-road vehicle use of the area is likely to decline when the site is developed; however, approaches from the waterfront are likely to increase dramatically with development. Such waterfront approaches by boats and jet skis would probably lead to harassment avoidance behavior on the part of many shorebirds as well as boat propeller impacts to the mudflat and eelgrass habitats found in the adjacent shallow bay waters.

The effects of well-meaning and industrious children can be quite harmful. With much more playtime on their hands than there is usually time available by security personnel to

patrol wildlife areas, they can be quite successful at trampling native vegetation, thereby destroying wildlife and impeding tidal flushing by construction of makeshift road bridges. The distribution of trash and litter in such areas may not only attract predators and scavengers, such as ravens and gulls; but garbage, such as plastic, may prove harmful to marine life and shorebirds.

Within the Chula Vista bayfront a predator management plan has been prepared (Conners, 1987) that addresses several issues of concern related to predation impacts. This plan provides a basis for predator management but does not adequately address the intensity of development proposed and the potential for attracting additional predators and scavengers to the area.

Because of the recognition of shortfalls of this plan and the lack of project-related specificity, the LCPR has incorporated a variety of measures to reduce human encroachment and domestic pet predators within the wildlife refuge lands. In addition, recent management plan standards and revisions to the LCPR buffering designs have been provided in applicant-submitted design requirements. These plan materials generally include:

- A requirement for fencing and native vegetation screening
- A requirement for use of berms to block visual encroachment at marshland fringes
- Prohibition of pets within the project area
- Preparation of interpretive signage, as well as a signing program to educate project users to the access constraints and reasons for concern
- Development and implementation of a trapping program
- Provision of a minimum 100 foot-wide "primary" buffer zone which allows for restricted passive recreation uses and has restricted lighting, interpretive signage and native scrub vegetation requirements

In addition to these requirements, other issues which should be required include:

- Prohibition of kite flying in parklands located in proximity to wetlands and mudflat areas. Kites are frequently perceived by shorebirds as predatory raptors and can force abandonment or restrict use by some birds of important habitat areas
- Specification of enforcement measures including the use of fines, trespass citations, and evictions is needed along with a plan for implementing these measures and a signage program to inform bayfront users. Enforcement would cover maintenance of garbage containers, trespass to refuge lands, pet controls, general litter laws, and CC&R's would be required for the residential development restricting pets

- Identification of implementation and enforcement staffing needs, funding mechanisms and contingencies. The plan must include a commitment to the program for the life of the project
- Development and execution of a joint-powers agreement between the US Fish and Wildlife Service, San Diego Unified Port District, City of Chula Vista, City of National City, and the California Department of Fish and Game. This agreement would specify when, where, how, and under what circumstances enforcement and predator management actions may be taken in various jurisdictions and which entity would be responsible for various actions.

The various concept plans included in the LCPR and appendix have proposed approval requirements for final project plans prior to issuance of building permits. These would, however, have to be prepared and included in a project-level Environmental Management Plan document. The project-level human and domestic animal management plans could be readily incorporated into the predator management plan (discussed elsewhere in this document).

With the implementation of these measures, the significant impacts associated with increased human and pet presence could be mitigable to a level less than significant at the project level. Project-level evaluation of specific detail would be required to confirm adequacy in the development of plans based on these guidelines.

~~The potential impacts of increased human and pet presence are considered significant and adverse. Mitigation of these impacts is possible; however, it will require a combined effort on the part of several distinct entities in order to achieve success. The unique presence of four separate governmental entities (Chula Vista, National City, San Diego Unified Port District, and the U.S. Fish and Wildlife Service) within the immediate area, poses serious regulatory and jurisdictional problems which are expected to require joint powers agreements in order to successfully implement mitigation measures. Additionally, this impact, like several others, will be continuous in nature. For this reason, mitigation will have to be ongoing and monitored carefully to determine program effectiveness and any changes which may be required to meet the desired mitigation goals.~~

#### Alteration of Predator/Competition/Prey Regimes

Residential or recreational areas are likely to have a greater promotional effect on the levels of domestic animals than nonresidential development; however, even nonresidential development could have major impacts on the area. A tourist complex which caters to a large number of people will generate a substantial amount of food and/or trash and will attract opportunistic scavengers, such as Common Ravens, a variety of gulls, European Starling, Black Rats, and Virginia Opossum which are known as aggressive predators and/or competitors in the coastal environments. Their increased presence would adversely impact the more sensitive species in the area.

The effects of non-native plants used in landscaping designs may not only spread and out-compete existing wetland plants as previously discussed, but they may also serve to attract

predatory or competing birds and mammals. As an example, various ice plants are commonly utilized landscape materials favored as a nesting area by both Black Rats and House Mice. Dense shrubbery provides cover and denning areas for such predators as the Virginia Opossum and the Raccoon. Large palm trees are frequent roosting and nesting sites of such predatory species as the Barn Owl (*Tyto alba*) and the American Kestrel (*Falco sparverius*). Increases in available habitat for these species would be expected to result in a corresponding rise in the local populations of these species and in their effect on the preyed upon resource species. The increase in abundance of these species could lead to higher mortality rates, poor reproductive success, or in the case of several species, nesting site abandonment. In some instances, the presence of perceived threats of predation are believed to have led to pre-nesting site abandonment (Pacific Southwest Biological Services, 1989b). Elsewhere, failed first-wave nesting attempts have led to site abandonment during the second-wave of nesting (K. Andrecht and E. Copper, pers. comm.).

The proposed tall buildings in areas adjacent to the buffer zones and sensitive wetland areas have the potential for creating both real and perceived threats of predation. Such structures may provide suitable hunting perches and nest sites for avian predators such as the Peregrine Falcon, American Kestrel, Common Raven, and possibly the Merlin. All of these species have keen vision and are effective hunters both from perches and on the wing (D. Grout, pers. comm.). In addition, such high structures may actually attract greater use by such species as the Peregrine Falcon, which currently occurs only infrequently within the bayfront. Such effects are apparent in the case of the Common Raven which often occurs as a flock of 2-7 individuals on and near the top of the Rohr Building which borders on the south side of the "F" & "G" Street Marsh.

Under the proposed Development Plan, tall buildings encroach as close as 100 [150] feet from the NWR boundary marsh with most tall building set-backs at a distance of 180-300 [250-400] feet or more from the marshlands. With the building heights proposed along the outer edges of the development (44-157 feet), potential perch ledges to marshlands range from 133 [150] feet to more than 500 [600] feet separation with angles of view falling between 11 [5]° and 44 [32]°, all of which are within a reasonable range of use by these raptors. Buildings which are nearer to the marshlands and which have a steeper angle view into the marshlands pose a greater threat than do more distant buildings. Beyond a certain buffer distance, the steepness of the angle of view may be more important than the distance of spatial separation between predator and potential prey. The reason for this is that low shrubs near the potential prey often form effective visual barriers while the visual acuity of these raptors is affected little by increases in distances of less than a few hundred feet.

In the case of coastal locations such as the project site, it has been suggested that buildings of four stories or higher would provide effective predator perches for Peregrine Falcons which are likely to opt to hunt from the highest available structures (P. Bloom, pers. comm.). The presence of tall structures may also create a perceived threat and thus avoidance of the area, especially by nesting birds and birds which are frequently preyed upon by avian predators, such as the Light-footed Clapper Rail, Black-necked Stilt, and a host of waterfowl. Habituation to predators and predator-like objects has been demonstrated in avian species (Schleidt, 1961 and Hinde, 1954a,b as cited in Morse, 1980). However, in other instances, birds confronted with a variety of changing stimuli, new stimuli,

or which are forced to make rapid determinations to respond or not respond tend to be slower to habituate or in some instances wrongly habituate and are more readily preyed upon. Morse (1970) noted that forest birds tended to respond to the actions of passing mourning doves as they would to their principal predator, an accipiter. In this instance, habituation would result in slowed response and an increased probability of becoming prey.

The threshold beyond which birds will significantly alter their use patterns as a result of building placement and associated stimuli is highly variable. Types of structures, extent and type of associated human activities, and the avian species considered, all play key roles in determining the impacts of building placement. Some "human resistant" birds such as Killdeer, Mallards and a host of gulls may not vacate the area under even the most intense development. Other birds, which are highly sensitive to human intrusion, may completely disappear from the area with even minor development. Still others may modify their behavior in proximity to the structures to a degree resulting in detrimental effects.

Belding's Savannah Sparrows have been found to readily abandon egg incubation when nests are approached (A. White, 1985 pers. comm.). The effects of buildings, bridges, or other large structures in the absence of human activities have not been well studied, however, there is indication that these features may play important roles in bird behavior. The general lack of avian nesting adjacent to the Rohr building bordering the "F" & "G" Street Marsh is believed to be the result of both real and perceived threats of predation; however, in the absence of any predator controls in this area, these factors are not readily separable.

Based on the information available, and an examination of "height:bird distance" ratios for nine large bayfront structures, an attempt was made to identify any patterns of avian use in the vicinity of large structures. The lack of pre-structure bird utilization and behavior data, the wide diversity of habitats adjacent to the structures, and the lack of control over non-structure associated disturbances all limit the applicability of this comparison. However, for lack of more comparable examples with both pre-project and post-project quantitative data, this information has been used in this analysis.

The results of this study led to the selection of the same 0.6 height:distance ratio extrapolated from studies on powerlines crossing the Columbia River (Willdan, 1982). Gulls and more disturbance tolerant species were found to uniformly range closer than would be dictated by strict adherence to the extrapolated ratio, and some more intolerant species would engage in active behaviors (i.e., foraging, display) within this range; however, few observations were made of species engaged in such non-wary behaviors as loafing.

Applying this height:distance ratio to cross-sections of the proposed development, the suitability of the set-back to avoid perceived threats was analyzed. The results of this analysis indicated that perceived threats might be expected within the buffer zones of the wildlife refuge, but that these threats would not be expected to extend into the sensitive wetland areas.

The extent to which the proposed development would manifest real predator threats is difficult to determine, but could be considerable given the potential losses of endangered

species from the wildlife refuge marshlands. For these reasons, impacts of the project on the existing balance of competitors, predators and prey are considered to be significant.

~~Based on the information available, reduced mass and structure setback are likely to have the greatest bearing on reducing the predator/competitor threat levels within the bayfront. These impacts could, however, also be partially mitigable through the creation of equivalent habitat outside of the zone subject to the project impacts. Of highest concern is the 3840 foot length of marshland fringing the "E" Street Marsh, Vener Pond, and the Sweetwater Marsh. It is most probable that the predominant impacts will be restricted to the shoreward 100-150 feet of marshlands (13.2 acres). These impacts could be substantially off set by the creation of similar habitat located farther from the development site but still integrated with the larger marsh complex.~~

~~Irrespective of the approach taken to off site impacts, the implementation of effective predator control measures would be a must to sustain the wildlife of the adjacent refuge. Predator control must be an active as well as a passive process and a continual operation to be functional. However, experience has shown that even the best efforts to control both wild and domestic predators only meets with partial success (J. Thurmond, pers. comm.) and some species such as the American Kestrel are all but un-manageable due to their sheer numbers and opportunistic behavior (P. Bloom, pers. comm.). For this reason, such an increase in predator impacts would remain unmitigable.~~

**Within the bayfront, effective predator control must be a passive process as well as a continual active operation.**

Passive predator/competitor management efforts would include incorporation of design features to both restrict access from the project to sensitive areas and to reduce the utility of the project area to predators/competitors. In addition to the concept buffering and landscape information included in the LCPR, the applicant has provided additional design standards since the publication of the DEIR. These design standards include:

- All buildings with a line-of-sight view to the NWR wetlands will be designed and built to preclude all horizontal projections or ledges wider than 2" unless projections are inclined at a 45° angle or greater
- All buildings will have inset roofs and all roof ledges will be suitably covered with anti-perching material
- No new above-ground transmission lines, cables, vertical towers, beacons, etc. will be included in the development and all roof-top accessories will be suitably enclosed in structures with anti-perch protection
- All building openings will be screened to prevent use as perch or nest sites by predators and other pest species

- Requirements for landscaping within the primary 100' buffer zone will utilize principally Coastal Sage and Succulent Sage Scrub vegetation along with berms and fencing
- Precclusion of invasive landscape plant materials within the primary buffer zone and project open spaces
- Precclusion of any structures within the primary zone which could be utilized as a perching or nesting site by raptorial birds
- Precclusion of structures in excess of 6' within the project area open spaces located adjacent to the primary buffer unless adequately screened or prevented from becoming a perch site

In addition to these design criteria, an ongoing predator management program would be required to effectively control predators in the bayfront area. Following circulation of the Draft EIR, additional information relative to standards for preparation of a predator management program was provided by the applicant. The applicant-proposed standards call for several items to be included in the program. Several additional items must also be addressed by this plan. The Predator Management Program developed must ultimately be subject to environmental review and analysis at the project level and will need to include the following items:

- A commitment to implementation of the predator management program for the life of the project and an identification of the funding mechanisms and costs associated with the implementation of the program including consideration of cost of living and cost of program requirements
- Identification of two full-time animal control specialist positions and a contract raptor specialist position to be filled by an individual who will be on-call to assist full-time staff as required and to provide expertise on raptor issues (to include an identification of minimum qualifications for these positions)
- Identification regarding what constitutes a predator threat requiring control
- Detailed specification of the implementation strategy for various control measures including any capture, relocation or disposal
- Commitment to a regular monitoring and monthly reporting program for sensitive species, predatory species, and control actions taken in the area
- Identification of the program which is to be followed to identify potential problems and correct these problems prior to requirements for predator removal
- An identification of enforcement actions for violation of "no pet" ordinances, trespass into wetlands and failure to adequately maintain refuse containers

- Identification of powers provided predator management personnel to correct or have corrected known predator management problems (i.e., perching ledges, landscape plantings, repair and maintenance of anti-perch material, etc.)
- Procedures for reviewing and amending the management plan as the program develops
- Identification of all permits, memoranda of understanding, and approvals required as well as a commitment to maintain these approvals
- An emergency action program and contact list for required handling of any critical issues not identified in the plan

With the diligent implementation of both the passive and active predator management programs, the effects of increased predation in the area could be substantially reduced. It has, however, been noted that even the best efforts to control both wild and domestic predators only meet with partial success (J. Thurmond, USDA, Animal Damage Control, pers. comm.) and some species such as the American Kestrel are all but unmanageable due to their sheer numbers and opportunistic behavior (P. Bloom, pers. comm.). Further, such predators as rodents, small carnivores, and domestic cats are a particular problem in that their presence in an area often goes unnoticed.

Based on extensive ecological and behavioral observations and biological monitoring work in the bayfront which spans a 6+ year period and includes over 3000 field hours on the site, it is anticipated that the residual impacts of the project will be a general increase in American Kestrel and mammalian predation within the first 100-150 foot wide wetland fringes of the "E" Street Marsh, Vener Pond, and the Sweetwater Marsh (3840 linear feet) which generally remain passible without encountering substantial water barriers. These areas have been previously observed to be the marshland foraging areas utilized most frequently by American Kestrels, Domestic Cats, Domestic Dogs, Striped Skunks, Gray Foxes and Coyotes.

These areas support nesting territories of Belding's Savannah Sparrows and a nesting colony of Black-necked Stilts and provide high-tide refugia for Light-footed Clapper Rails in addition to possessing less sensitive resources. Concerns over mammalian predation on birds utilizing the shoreline mudflat areas of San Diego Bay are much lower due to the generally lower threat level to birds engaged in foraging or loafing on open flats and the low frequency of occurrence of sensitive species in these areas. Also of lesser concern relative to this issue is the "F" & "G" Street Marsh which, under current conditions, exhibits a higher level of human and mammalian predator disturbance than that which would be manifested under the proposed development plan or any other alternative which includes additional wetland and upland buffering as well as fencing.

To compensate for the expected loss of habitat values along the "E" Street Marsh, Vener Pond, and Sweetwater Marsh fringes, it would be necessary to create replacement habitat of similar type (i.e., mid-marsh coastal salt marsh/salt pond fringe with open salt panne flats) in an area of the Sweetwater Marsh complex located away from the development site.

The northwestern and north-central portion of Gunpowder Point are recommended; however, other suitable options may exist. In recognition of the values retained in these areas, a suitable replacement would be a 1:1 ratio (13.2 acres) as opposed to the typically higher mitigation ratios for habitat areas which are completely lost. Because there will be a lag-time associated with the establishment of targeted habitat values in the mitigation area, the creation of the mitigation site should precede construction of the project or occur concurrently with the first year of project construction work.

The items outlined in the above paragraphs certainly have the ability to reduce the significant impacts associated with predator/competitor problems to an acceptable level. Based on the requirement to develop the details of the Predator Management Program and a habitat creation plan for 13.2 acres, these impacts are considered significant and mitigable at the project level.

#### Biological Effects of Lighting

The effects of nocturnal lighting on native wildlife is substantially unknown. It is presumed that such lighting could potentially increase levels of predation by nocturnal predators, and lead to abandonment of lighted habitats by some species. Further, it has been frequently reported that certain lighting may increase the incidence of collisions with structures by passerine bird species.

During the course of extensive literature reviews, almost no information was located that would suggest potential impacts of increased lighting within the bayfront marshlands; however, reasonably foreseeable effects could include abandonment of night roosting areas and increased efficiency of nocturnal predators. It has been frequently suggested that nocturnal rodents are less active on moonlit nights as an adaptive response to higher predation pressures. A literature search through the Information Transfer System was conducted on the subject of artificial lighting and birds by Martin Kenney of the USFWS. This search resulted in the identification of only one reference on the subject of lights and habitat utilization and predation. This one paper noted apparent incidental foraging by a Bittern within an artificially lighted area, presumably recognizing an increased success rate as a benefit of the lighting (Reed, 1978). The general lack of reports is suggestive of a low occurrence of predation; however, it would be extremely difficult to determine the actual effects of artificial lighting without extensive studies. Even so, these studies might prove inconclusive due to the combined problems of night monitoring and infrequent observation of predation at any time of the day.

Because information on these concerns is not available, a conservative approach has been taken by the project applicant and the EIR consultants. The applicant has recently submitted lighting standards for incorporation into the proposed project. This lighting program has the goal of generally reducing the illumination of wetland areas and precluding the use of those light sources which are known to enhance collision rates in various passerine bird groups. The lighting plan enumerates both design and operational standards including the following:

- Restriction of lighting within the 100 foot primary buffer zone to low voltage safety lights located at an elevation of 3 feet or lower and visually separated from the marshlands by a vegetated berm
- No floodlighting of vertical faces which face the wetland areas
- Use of searchlights and ceilometers within the Midbayfront will not be permitted
- Windows facing wetlands are to be tinted to reduce the effects of interior light generation
- Restrictions on building floodlighting in areas not facing wetland areas
- Shielding of street lighting in areas of Marina Parkway and "F" Street which occur in proximity to the "F" & "G" Street Marsh
- Tennis court lighting shall be shielded and not operated after 11 pm

This lighting program has been developed to an adequate level to provide satisfactory assurance that a reduction of impacts to a level of less than significant can be accomplished at the project level. Because these criteria must be carried forward to an implementation plan at the project level, this aspect of the project must be included in the project-level environmental review.

#### Alteration of Habitat Use Areas

The proposed project would result in the elimination of approximately 135 acres of disturbed lands and fallow agricultural fields. This area would be replaced by approximately 10 acres of deep-water salt pond habitat and 126 acres of otherwise developed areas including several turfed parks and landscaped greenbelts. Such conversions would result in both losses of prey species and encroachment impacts and would lead to the loss of foraging use of these areas by such raptors as the Northern Harrier, Black-shouldered Kite, and seasonal and infrequent visitors including the Prairie Falcon, Merlin, Ferruginous Hawk, Swainson's Hawk, Sharp-shinned Hawk, and Cooper's Hawk. In addition, use by such species as the Red-tailed Hawk, Red-shouldered Hawk, and the American Kestrel will be greatly reduced. Other raptorial species such as the Peregrine Falcon and Common Raven are not expected to seriously decline in the area and may even increase with development. There is expected to be a decrease in open field associated species and an increase in urban affiliates such as House Sparrows and Rock Doves (domestic pigeons).

Relative to raptors, the Chula Vista bayfront encompasses four distinct habitat types: salt marsh, open shore and shallow ponds, and fallow field uplands. This combination of upland and wetland habitats within one area supports a faunal array that would not exist if only one habitat type were present. An abundance of upland prey species, particularly Desert Cottontail, California Ground Squirrel, small rodents, doves and pigeons, and small passerine birds, exists close to a large and diverse community of waterfowl and shorebirds.

Furthermore, these prey items exist in a relatively open area with limited human disturbance.

The abundance and diversity of potential prey types and body sizes at the bayfront provide an outstanding prey base that supports a variety of raptor species. A diverse population of predatory birds that includes accipiters, buteos, falcons, kites, Osprey, and owls utilize the site, especially during the winter months. Some species such as the Red-tailed Hawk, American Kestrel, and Northern Harrier can be seen on any day and, amazingly, three pairs of Harriers nested on the Sweetwater NWR in 1990. Barn Owls are probably also in this category, but they are nocturnal and are more difficult to observe. Black-shouldered Kites and Ospreys are noted very frequently while other species, such as the Peregrine Falcon, Merlin, Prairie Falcon, Cooper's Hawk, Burrowing Owl, and Short-eared Owl are seen regularly though less often. Many of these raptor species observed at the bayfront are uncommon or rare in San Diego County (Unitt, 1984). Their presence at the bayfront, as well as general length of stay and fidelity to the site are clear indications of the area's value to raptors. In the San Diego region, there are only a few sites where such uplands occur adjacent to similarly productive aquatic and wetland habitats. These areas include the MKEG property at the Otay River, portions of the Tijuana River Valley, the Naval antenna site, Delta Beach Naval lands, and Fiesta Island in Mission Bay. The next sites which support similar resources are located approximately 22-23 miles to the north at Los Peñasquitos Lagoon, and 24 miles north at San Dieguito Lagoon. Somewhat similar habitats occur on the east side of Lower Otay Reservoir and around Sweetwater Reservoir. Management practices and encroachment into these areas have further restricted the usefulness of some of these areas. As such, the loss of any of these sites, that are currently heavily utilized, would constitute a significant impact on raptor habitat.

Though there has been an apparent decline in use of the bayfront by some raptor species, usage is nevertheless still quite intense. The decline in use does not reflect decreasing importance as habitat for raptors, but rather reflects gradually increasing impacts associated with human encroachment and disturbance in the area. Intense foraging activities and site fidelity testify to the value of the bayfront for raptors that continue to use the site. The importance of the bayfront to wintering raptors can be inferred from the diversity and abundance of raptors using the site, but it is necessary also to consider the scarcity and limited extent of similar areas of habitat in the region.

The stable level of incidental occurrence of many raptor species indicates that the bayfront is included within the movements of species or individuals with large home ranges. Less than total fidelity to the bayfront by these raptor species does not suggest that the site is unimportant. Rather, the bayfront is viewed as valuable enough to utilize during wide ranging hunting activities, in spite of its small size and isolation from other habitats. High raptor populations at the bayfront are probably a function of prey availability, low human disturbance levels, and a scarcity of such sites in the region.

In addition to raptors, the proposed project would be expected to result in a concurrent reduction in open field associated birds and mammals and an increase in urban affiliates such as House Sparrows and Rock Doves (domestic pigeons).

The inclusion of sheltered pond environments within the development area is expected to promote the presence of such disturbance resistant waterfowl as Mallards and Coots. In addition, these ponds are likely to receive extensive use by a whole suite of waterbirds during storm events. This is currently the case for most sheltered areas such as the small brackish water marsh found near "F" Street and the salt pond located in the Sweetwater Marsh near the northeastern boundary of the Midbayfront.

Due to the limited extent of similar coastal habitats, and the high diversity and numbers of raptors utilizing this area, the loss of habitat would be considered an incremental, but significant adverse effect of the project which would be unmitigable under any major development plan for the area. The loss of other upland associates would not be considered significant. The creation of the sheltered pond habitat is expected to provide a positive attribute to the avian fauna of the bayfront.

#### Effects of Habitat Shading

Salt marshes are generally low in stature and are open environments; often exposed to the extremes of temperature and wind. They are rarely shaded except on overcast days and are among the most productive habitats/environments on the planet. The productivity of mudflats and salt marshes is evident by the large numbers of shorebirds which feed here during low tides. The effects of shading these highly productive habitats by high rise buildings or other tall structures is largely unknown; however, changes in primary productivity and disruption of activities of invertebrate and vertebrate animals are of important concern.

In the typical shading areas from bridges in the San Diego area, impacts to the vegetation are readily apparent immediately below bridges, but are not detectable away from the crossings. Further, the shading from these bridge crossing structures would be expected to be more pronounced than that from a more distant building since the diffused light input would be much less around the more proximate structures. Based on the conditions manifested around existing structures, the proposed buildings would not be expected to have an adverse impact on the marshland vegetation.

Epibenthic macro-invertebrates and terrestrial insects in and around the bridge structures typically reflect a common assemblage of those found in the more exposed marshlands. These include Fiddler Crabs (*Uca crenulata crenulata*), Yellow Shore Crab (*Hemigrapsus oregonensis*), Lined Shore Crab (*Pachygrapsus crassipes*), California Horn Snail (*Cerithidea californica*); also present adjacent to these bridges are such marsh-associated insects as the Wandering Skipper (*Panoquina panoquina errans*), and tiger beetles (*Cicindela* spp.). No infaunal assemblages were examined and thus no comparisons of this fauna may be made. It is, however, expected that these species, which live in a more thermally stable environment than those exposed to direct solar heating, would show even less shading associated impacts.

Potential shading impacts to vertebrate fauna are much more difficult to assess and are likely to be complicated by interactive behavioral impacts to the species. The effects that shading may have on vertebrates include cooling and creation of perceived threats. The fact

that the organisms are mobile and can seek non-shaded areas, combined with the probability that the temperatures in the shade will be only slightly below those in the exposed areas due to the time of day at which the buildings are expected to cast shadows into the wetlands (and above the normal night-time temperatures), suggests that for vertebrates, cooling will not have a dramatic impact on the marshlands.

#### Impacts of Vector Control Requirements

It may generally be assumed that the proximity of the proposed development to such extensive wetlands as are found in the Sweetwater NWR will eventually result in conflicts between people and insect pests. In these situations, public safety and, generally, "comfort" has prevailed as an overriding consideration in the determinations as to whether or not to implement a vector control program. There are several methods for dealing with vector problems. It must be recognized that control measures can adversely affect non-target species and even may result in negative ecological consequences when only the target pest species are affected. For this reason, control methods must be chosen that minimally impact the ecological values of the Refuge, while still abating the vector problem to a satisfactory degree. The least damaging measure for dealing with potential insect pest problems, and one which is in use in the southeastern United States, is to impress upon prospective users of the waterfront/wetland development that they are choosing to live/recreate next to a wetland, and that there could be insect pest problems. These people must recognize that they are there of their own will, and as such, they should be willing to experience nature to its fullest. For their part, operators of the facilities must bear the responsibility of informing prospective users of potential vector problems.

Humans are an extraordinarily adaptable animal, and people are already demonstrating their ability to deal with insect pest problems on a personal level in more humid areas by adapting their lifestyles to the situation.

Unfortunately, present attitudes in southern California do not appear to encompass this approach. Examples of adaptations currently in use elsewhere in the United States include going indoors before dark, and screening off areas that people want to use (e.g., swimming pools, balconies). In that it is likely that a vector problem will be identified at some point in the future, a pre-emptive plan to address this problem should be developed as a part of any project proposed for the site. The plan should include measures to identify precise vector problem areas. The plan should seek to address true health risks and not simply nuisance insect problems. The plan should identify measures to minimize treatment requirements. Finally, the plan should identify control techniques which are least damaging to the environment and non-targeted organisms.

It should be noted that vector control measures may be required to be implemented in portions of the National Wildlife Refuge. Such measures are not unknown in National Wildlife Refuges, and are, in fact, a reality in the Tijuana River Estuary, where residents living adjacent to the Refuge demand insect pest abatement. In that situation, vector control measures are allowed under terms specified and strictly controlled by the U.S. Fish and Wildlife Service.

Some methods that were considered acceptable several decades ago, such as ditching to drain areas of standing water, are inconsistent with present goals and policies of wetlands protection, and are now generally unacceptable. Chemical control methods can be effective, but even substances that are fairly target specific, such as Golden Bear (a petroleum product which creates a thin oil layer over the water and effectively suffocates mosquito larvae), can still cause mortalities among non-target species. As such, the viability of extensive chemical control of vectors in a federal wildlife refuge is questionable.

Biological control methods, including the use of BTI (a bacterial treatment) in wetlands, and the introduction of fish that eat mosquito larvae into man-made ponds, lagoons and basins may hold the greatest promise for appropriate vector control. Unfortunately, each of these options has its own limitations. Non-chemical, non-biological vector control measures for areas of standing water actually created by the development (e.g., ponds) include reducing the area of calm standing water by keeping water circulating (e.g., with fountains) or by flushing out ponds regularly according to the lifetime of larval stages.

This issue is unquestionably one of cumulative significance and must be addressed through the proactive development of a vector management plan. No matter which approach is taken, the ultimate development and implementation of a specific vector control plan is a project level task that must be undertaken under the guidance and terms of appropriate resource agencies. Such a vector control plan will undoubtedly be quite controversial and will need to be evaluated in a project-level environmental review document.

The possibility of marsh bird behavioral modifications remains a concern. The bridge structures which have been utilized as examples of similar circumstances for the vegetation and invertebrates do not function well as examples for vertebrates due to the proximity of human disturbance. These structures provide for close overhead encroachment of human activities, particularly visual, into the adjacent marsh habitats; the extent of this encroachment differs tremendously from that which would be expected to occur due to the buildings. Shadows cast by such objects as kites, airplanes, helicopters, and even dirigibles have been observed to have definite startle effects on marshland avifauna (Pacific Southwest Biological Services, Inc., 1987a, b, and c; 1988). On rare occasion, the shadows of fast moving clouds have even been observed to briefly startle foraging or loafing shorebirds (Merkel, pers. obs.). In general, such impacts are limited to the initial reaction and do not lead to an abandonment of the immediate area, although short flights are common.

Within the "F" & "G" Street Marsh, avian activities are frequently noted within the shadow cast by the large Rohr Industrial Building at the southern boundary of the wetlands. These activities are, however, often restricted to a small number of individuals and a fairly narrow suite of birds. Although birds are observed to forage adjacent to this building, no nesting within the immediate area of the building is known to occur. This is distinctly different from areas of the "E" Street Marsh and Vener Pond where marsh fringe nesting by Belding's Savannah Sparrows and Black-necked Stilts does occur on a regular basis. These conditions which exist in the "F" & "G" Street Marsh are not likely to be the result of the shadow cast by the Rohr structure as much as the presence of the building itself and the real or perceived threat that the structure poses to nesting nearby. These issues are not considered

to be shadow related and have been previously discussed. For this reason, shading would not be considered to have an adverse effect on the biological resources of the bayfront.

### Threatened and Endangered Species

The Chula Vista bayfront study area supports a number of species listed by federal and state agencies as endangered. In the cases of the Salt-marsh Bird's Beak, California Brown Pelican, California Least Tern and Peregrine Falcon, endangered status has been adopted at both state and federal levels. The Belding's Savannah Sparrow is state-listed as endangered but does not carry federal threatened or endangered status. Impacts to these species which may be realized under the proposed project are also discussed elsewhere in this section of the report. For this reason, this section is to serve only as a summary of expected impacts to these species. Detailed analysis should be reviewed under ~~the potential cause, e.g., Human/Pet Presence Effects (3-95), Alteration of Predator/Competition/Prey Regimes (3-97), Alteration of Habitat Use Areas (3-101), Effects of Habitat Shading, etc. (3-102), and Construction Impacts of Seawater Intake System (3-109).~~

#### Salt-marsh Bird's Beak (*Cordylanthus maritimus* ssp. *maritimus*)

The Salt-marsh Bird's Beak occurs near the center of the Sweetwater Marsh, well away from the proposed Midbayfront development in areas managed by the U.S. Fish and Wildlife Service. The proposed Midbayfront development project would not alter any of the physical parameters of the marshlands surrounding the extant population, although the nearby freeway/flood control project stands to significantly alter the hydrologic characteristics of the Sweetwater Marsh. Further, no human-associated impacts within the "remote" locale occupied by this species are expected to have an impact on the population. For this reason, impacts to this species are not expected to occur.

#### California Brown Pelican (*Pelicanus occidentalis californicus*)

The Brown Pelican utilizes the shoreline fringes of the Midbayfront as foraging and loafing areas. These birds are highly tolerant of human activities and may be found throughout highly developed portions of most southern California bays. No mainland nesting by this species occurs and therefore, potential impacts would focus on disruption of non-breeding activities including foraging, loafing, and social behavior. Elevated turbidity during the construction phases of the project could potentially lead to reduced foraging activities or success in the adjacent waters. The results of such impacts are likely to be short-term shifts in foraging use areas to other portions of the bay. No lasting impacts would be expected as a result of the project. The proposed inclusion of the outer saltwater lagoon is likely to support a long term increase in pelican activities in the Midbayfront. The proposed dam (land between San Diego Bay and the 10-acre lagoon) is expected to receive loafing and night roosting uses similar to those observed on floating structures in Mission Bay and San Diego Bay.

Ultimately, conflicts between the desired aesthetics of the development area and the unsightly presence and rank odors of guano along the dam may result in the desire to exclude these large birds from the dam. This may need to be addressed in site management

policies, however, localized exclusions of this species from certain structures would not be considered a significant impact. ~~The proposed project has the potential for having a short-term adverse but insignificant impact on the California Brown Pelican should measures not be implemented which would minimize water quality impacts.~~

#### California Least Tern (*Sterna antillarum browni*)

The California Least Tern occurs seasonally within the study area as a nesting species. This species, like the pelican, forages along the shallows of the Chula Vista bayfront and is opportunistic in nature. Unlike the pelican, the species status as a local breeder makes foraging within certain areas near the nest colonies essential. Decreases in water quality through increased turbidity or surface spills can result in lowered foraging success, which has been identified as having probable adverse impacts through reduction in fledgling success. In addition, the increases in human and pet presence within the bayfront is likely to result in increases in nest site predation and disruption in areas where young are being trained to forage. Further, the project would be expected to alter the predator regime in the local area by increasing the concentration of scavengers like gulls, ravens, raccoons, and opossums as well as increasing the numbers of avian predator roosts. These environmental changes are considered significant and mitigable.

#### Light-footed Clapper Rail (*Rallus longirostris levipes*)

The Light-footed Clapper Rail is a resident of the "E" Street and Sweetwater Marshes. This species is rather secretive in nature and tends to avoid areas of high or even moderate levels of human activity. Nesting is typically accomplished in areas of high marsh hummocks or low lying upland fringes. Nests are often susceptible to flooding and mammalian and reptilian predation. Adults and young alike are susceptible to avian predation. During periods of extreme tides, rails are forced into upland fringes or onto floating/emergent debris where disturbance and predation threats are magnified. Increased predator abundance and human/pet activities in and around the marshlands of the bayfront are likely to result in declines in Clapper Rail populations and avoidance of certain fringe habitat areas. The threats of predation due to the presence of large structures is also expected to play a significant role in limiting habitat utilization. These impacts are considered significant and mitigable with the exception of the predator threats associated with building mass and placement which are considered significant and ~~unmitigable under the proposed project~~ ~~mitigable at the project level~~.

#### Peregrine Falcon (*Falco peregrinus*)

The Peregrine Falcon is a skilled avian predator which tends to hunt from high perches and primarily takes birds in flight. This species is fairly tolerant of human activities and has been successfully introduced into urban areas--preying primarily on pigeons. During 1989, the first successful San Diego County nesting in a 47 year period occurred on the Coronado Bridge. Marshland and expansive mudflat areas found in south San Diego Bay attract Peregrines due to the abundance of waterbirds.

The proposed development with the implementation of building design standards would not be expected to provide considerable any perching sites or and even potential nesting habitat for this species. As a consequence, the occurrence of resident birds would be expected to show minor declines, rise, as would the use of the area by migratory falcons. Such increases decreases would benefit the falcon. Due, however, to the conflicting issues related to the presence of other endangered birds which may fall prey to falcons, the promotion of this species is not considered to be of benefit to the overall ecology of the area, and more specifically, to the other endangered birds which are more restricted in their habitat requirements than is the Peregrine, not be expected to result in significant adverse impacts to the species.

#### Belding's Savannah Sparrow (*Passerculus sandwichensis rostratus*)

The Belding's Savannah Sparrow is a resident bird of the salicornia dominated salt marshes found within the bayfront study area. This species, like the Clapper Rail, has been characterized as being relatively secretive in nature and rather susceptible to human and pet impacts. Approaches at the nest site may lead to nest abandonment or accidental nest damage (A. White, pers. comm. 1985; Zembal *et al.*, 1988). Also similar to the Light-footed Clapper Rail, the Belding's Savannah is susceptible to predation at or near the nest by mammals and reptiles. Wading birds such as the Great Blue Heron are also potential predators of young birds.

The proposed project would be expected to have significant impacts on this species through the enhancement of predator activities, increased harassment and predation by humans and pets, especially cats, and modification of habitat use areas. These impacts may be substantially reduced by the implementation of the predator management program and creation of new habitat to compensate for loss of value due to encroachment and predators; however, remaining impacts Impacts to this species would be considered to be significant and unmitigable at the project level.

#### **Construction Impacts**

The construction of the proposed project will involve substantial earthwork, dewatering, and building erection. This project is expected to generate considerable noise and increased human activities for an extended period of time (20 years) and has the ability to further generate elevated turbidity in adjacent waters, siltation in adjacent wetlands, and elevated predator/scavenger densities within the vicinity of the development area. Most of these potential impacts are discussed in preceding subsections.

While evidence suggests that continuous or repetitive noise has little effect on avian activities (Pacific Southwest Biological Services, 1987a, b, and c; Dooling, 1982; Dooling *et al.*, 1971; Awbrey *et al.*, 1980; Awbrey, pers. comm. 1986), inconsistent noise or noise associated with visual stimuli may have cumulative impacts on avian behavior. Human activities within the development area are likely to be extremely high during the construction phases. Limiting movements under such conditions is often difficult and "wandering" contractors may cause substantial damage without recognizing their impacts. This is

especially true during avian nesting seasons, the time when birds establish nests through the actual fledging of young.

Mass grading often leads to high silt runoff during winter storm events. The transport of silts during the early phases of development is generally the most damaging since this is the period in which erosivity is greatest, and permanent drainage facilities are not in place to control and direct storm waters. Turbidity as well as sedimentation may become serious problems leading to habitat loss, destruction of organisms, and disruption of foraging activities by shorebirds as well as aerial fish foragers. Contaminant spills are also most likely to occur during this period of a project.

All of these impacts or potential impacts are considered to be cumulative in nature and may have significant but readily mitigable short-term or lasting effects on the environment.

### Marine Resources Impacts

#### Impacts To Eelgrass

The proposed project includes two direct drainages to San Diego Bay from the development area. ~~and would require a salt water intake system to feed the internal lagoons.~~ The storm drain outlets are designed to empty at the top of the existing mudflat and run over the surface of the flat at low tide. This would be expected to create localized and shifting channelization and modifications to the existing erosion and accretion patterns within the intertidal and shallow subtidal areas ~~(see Drainage and Water Quality Impacts discussion above).~~ ~~In addition, if a lagoon intake system is required it could result in minor direct impacts to existing eelgrass beds through pipeline placement.~~

Eelgrass (*Zostera marina*) has been identified as a habitat of major importance to many juvenile and adult fishes and invertebrates. Regardless of size, this community/habitat promotes extreme productivity to marine and estuarine organisms. Eelgrass requires stable sediments, good water circulation and high light penetration. Excessive amounts of freshwater which would alter the salinity significantly could result in the loss of eelgrass in the upper reaches of its tidal range. Similarly, large amounts of runoff can also be expected to carry with it large amounts of sediments. These sand and mud particles may literally bury eelgrass beds if they are released in large volumes, coat blades with a silt layer, or cloud the water column which effectively limits photosynthesis. In addition, such deposition can raise the bottom contours out of the range required to support eelgrass growth, change the sediment quality so as to not allow sufficient oxygen transfer to the eelgrass roots, or alter the boundary layer circulation patterns and ultimately eliminate the conditions necessary for eelgrass habitation. The processes are always at work to a certain degree in all such systems, and in the case of severe storms these processes work more quickly. However, it is the unnatural conditions which have the most severe impacts.

Based on the proposed project design, significant and mitigable impacts to eelgrass beds would be expected to occur due to the placement of drainage pipes. The severity of rapid sedimentation into the marsh and near shore environs can largely be controlled by placement and maintenance of sediment traps (which should be used in conjunction with

oil traps). However, even with these changes, the intertidal erosion created by these drains would remain a significant adverse effect, mitigable by pipeline extension into deepwater areas of the bay or possibly through the use of energy dissipators and flow diffusing structures at the shoreline discharge points and habitat compensation outside of the impact area (see discussions under Drainage and Water Quality Impacts).

### Impacts To Mudflats

In addition to direct impacts of the required salt water intake system, the proposed placement of stormwater drainages at San Diego Bay would lead to substantial erosion of mudflats during low tide releases. These releases would result in focused areas of low salinity, and modifications of the sediment erosion and accretion patterns. chemistry and potential increased contamination of sediments. The mechanisms which are at work in potentially altering eelgrass beds are the same as those which would influence the mudflat and its representative organisms. Most organisms living on mudflats can tolerate a wide range of salinities and therefore are not likely to be killed by intermittent freshwater runoff. Deposition of sediments or prolonged exposure to reduced salinities, however, may lead to dramatic changes in the mudflat communities. The deposition of sediments can kill the representative organisms by smothering suspension or filter feeding organisms. Recolonization by these organisms into the newly provided habitats is often successional in nature and is reliant upon maturation of sediment chemistry.

In the event that the particle sizes composing the sediment changes dramatically, there will probably be a shift in the types of organisms composing the fauna in a particular area. For example, in a transition from muddy to sandy habitats typifying the higher energies of fluvial channels, there is likely to be a shift from deposit-feeding polychaetous worms to smaller filter-feeding polychaetes and phoronids. However, it is unlikely that the preceding organisms would be completely eliminated from the mudflat or marsh habitats since these areas are often characteristically patchy environments hosting a variety of unique sediment types (Merkel, pers. obs.). The resulting impacts to areas affected by the storm drains is likely to be a reduction in the organisms typically consumed by foraging shorebirds, thus leading to shifts in the shorebird foraging patterns. These changes would be considered significant and mitigable.

### Construction Impacts of Seawater Intake System

~~Construction impacts of the seawater intake system are similar to those identified as potential concerns in other sections of this analysis. Erosion and sedimentation are considered to be the primary concerns. In addition, elevated turbidity levels at dewatering point discharges or during the initial stabilization period are of concern to the health of the eelgrass and mudflat habitats nearby. As an additional concern, should construction discharges generate high turbidity during the months of April-September, water clarity would suffer and a potential adverse impact to the foraging activities of California Least Terns may be realized. This impact would be considered significant due to the species' high use of the area, proximity to the "D" Street nest colony, and an apparent (though not rigorously tested), link between foraging and reproductive success (Massey and Atwood, 1982, 1983, 1984; Copper, 1986). Construction impacts are considered to be potentially significant and~~

~~adverse with respect to marine resources; however, they are mitigable through construction timing and structural changes.~~

### Cumulative Impacts

The development of the Midbayfront site would result in the loss of substantial enhancement and habitat expansion opportunities which occur in only a handful of locations in southern California. This lost opportunity would be considered to be significant and will continue to increase in significance as similar sites are lost due to development. Further, the proposed development is expected to restrict the enhancement potential of the wetland areas under federal management by creating a continual source of predators and other disturbance factors. These impacts have been previously identified as significant on an individual basis, however they are cumulative in nature in that continuing changes in land-use of the region will result in further intensification of predator problems from both landward and bayward sources. Further discussion is contained in Section 9.0.

### Alternative Project Impacts

~~Six Eight~~ separate on-site project alternatives have been proposed. Each of these alternatives varies in some degree from the proposed project. In general, however, any bayfront development will include certain features which will have similar adverse biological impacts. For instance, all projects irrespective of size will include grading and drainage features which have the potential for significant adverse impacts. Increases in human and pet activities will result under any of the project alternatives and promotion of predators will result from all visitor serving and residential uses. For these reasons, the following summaries of alternative design focus on the differences between the project and the alternatives rather than addressing the similarities.

#### **Alternative 1: No Project**

This alternative would maintain the status quo in the bayfront. Project associated impacts would not occur, and project associated benefits would also not occur. Continued illegal access would be an ongoing problem; however, the levels of human and domestic animal intrusion are likely to be less than those under the proposed project. Predator perching would remain a minor problem in the bayfront; however, nesting activities would probably not vary much from those which have been exhibited over the past ~~four five~~ years.

#### **Alternative 2: Existing Approved LCP**

This alternative would adopt the existing LCP development guidelines as they exist. This alternative would have impacts similar to those identified for the proposed project (~~with predator management mitigation~~) with the exception of creating significantly fewer impacts of aerial predator threats to marshbird foraging and nesting activities through reduced building mass. This alternative could also incorporate any of the newly proposed predator control and management standards identified in the proposed LCPR and considered to be a part of Alternatives 3, 4, 5, 7, 8 and 9 at the project level. Human/pet and other mammalian predator access would be a concern under this alternative as would drainage

and marine resource impacts. Predator perching would likely remain a problem for such birds as Common Ravens and American Kestrels; however, the two-four story buildings proposed under this alternative would likely receive little, if any, use by such predators as the Peregrine Falcon, which favor extremely tall structures and would probably prefer the substantially taller ~~existing~~ transmission line towers. There is a realized benefit to non-treated open water features such as identified in the proposed project and Alternatives 3-5 and 7-9. This alternative lacks these features and would thus not provide this benefit to migrant and resident avifauna. This lack of a pond, however, is not considered to be a significant drawback to this alternative.

#### **Alternative 3: Reduced Density - 1**

This alternative is a reduced density project which falls between the currently approved LCP and the proposed project. Again, most of the project impacts such as human/pet disturbance, construction, drainage, and marine resources would remain unchanged or substantially similar under this alternative. Building massing has generally been pulled back from wetland areas and decreased in size from the proposed project. ~~This would probably lead to reductions in the impacts of avian predator threats to marshland birds, however, This would not result in significant reductions substantial change in either avian or mammalian predator concerns identified for the proposed project. This alternative differs from Alternative 2, in that Peregrine Falcons would be expected to make use of the taller buildings within the inner bayfront as foraging or potential nesting sites. In addition, This alternative provides a more accessible inner lagoon habitat than the proposed project and would be expected to be utilized by some human tolerant species of waterfowl, and a still wider assemblage of waterfowl during storm events. This is considered to be a benefit of this alternative, but is not of substantial significance over the proposed project.~~

#### **Alternative 4: Reduced Density - 1A**

This alternative is substantially similar to that of Alternative 3. Minor changes from Alternative 3 have been made to remove hotel bungalows and the luxury hotel from the west side of Marina Parkway. Impacts would be considered similar in type and magnitude to those of Alternative 3. The removal of buildings west of Marina Parkway is of benefit and lessens impacts; however, these changes are relatively inconsequential with respect to the impacts identified previously for Alternative 3.

#### **Alternative 5: Reduced Density - 2**

This alternative is substantially similar to Alternatives 3 and 4. Building elevations have been further reduced. These changes are, however, not considered to vary significantly from the project as proposed in Alternatives 3 or 4 and impacts would be expected to remain substantially similar to those identified for the preceding alternatives.

#### **Alternatives 8 and 9**

**See the DEIR, Volume I, Sections 4.2.7 and 5.2.7.**

## Mitigation

Several potential impacts of the proposed project have been identified in the preceding section. In evaluating the impacts and developing mitigation measures, the synergistic effects of all of the individual impacts were considered. The individual impacts were from:

1. Increased Freshwater Input
2. Contaminant Discharge
3. Sediment Accretion and Erosion
4. Human/Pet Presence
5. Alteration of Predator/Competition/Prey Regimes
6. Alteration of Habitat Use Areas
7. Alteration of Eelgrass
8. Alteration of Mudflats
9. Construction Impacts
10. Vector Control Requirements

Many of these impacts may be lessened or mitigated to a level of non-significance less than significant through the implementation of a variety of precautionary measures. Some of these measures have already been discussed or proposed through a variety of interactions between the developer, the City and the consulting team. Other measures have been proposed and committed to by the applicant following circulation of the Draft EIR. In some instances, impacts cannot be eliminated without substantial project redesign. These impacts remain significant and unmitigable unmitigated and are re-identified at the end of this section. In other instances, the impacts are reasonably mitigable, however, not enough specific project-level detail has been provided to determine whether or not the impacts of the proposed project will be suitably reduced to a less than significant level. These impacts are considered significant and not mitigated at the plan level.

## Requirements:

1. The proposed project should implement all environmental management measures and mitigation programs proposed in the LCPR. In addition, the project should include the preparation of a single bound program which incorporates the following biological resource management plans as individual sections:

- Predator Management Plan
- Human Activities Management Plan
- Landscape Design and Management Plan
- Water Quality/Runoff/Drainage Management Plan
- Mudflat and Wetland Monitoring Plan
- Project Lighting Plan
- Construction Monitoring and Management Plan
- CC&Rs/Ordinances/Applicable Policies

This document should be available in a completed form for review during the project level environmental process.

~~The proposed project should include low flow diversions from the freshwater detention basin into the "direct to bay" delivery systems such that un-seasonal freshwater drainage is not allowed to pass through the "F" & "G" Street Marsh. This could include a stand pipe drain near, but below, the level of the detention basin spillway. Normal wet season, storm waters should be allowed to discharge through the basin into the "F" & "G" Street Marsh. (Mitigates 1, 2, 3)~~

2. All post-construction collector drains should be directed through large volume silt and grease traps prior to being shunted into the freshwater detention basin or the bay discharges. The trap/traps placed on lines entering the detention basin should be triple-chambered. (Mitigates 2, 3)
3. The silt and grease traps should be maintained regularly with thorough cleaning to be conducted in late September or early October and as-needed through the winter and spring months. Maintenance should be done by removal of wastes rather than flushing, as is unfortunately often the case. City inspections of these traps should be done to ensure that maintenance is occurring as required. (Mitigates 2, 3)
4. Long-term silt removal maintenance of the detention basin should be minimized ~~not be conducted~~ following the initial construction phases of the proposed project. This ~~maintenance cleaning~~ should not be required since the traps, if properly constructed and maintained, will capture the vast majority of the silts which would be deposited in this basin. (Mitigates 1, 2, 3, 7, 8)
5.
  - a. The two "direct to bay" drains should be extended to subsurface discharge points located in the existing "J" Street Marina boat channel. These discharge points should be located at a minimum depth of -10 ft. MLLW and should be buried in the mudflat to a point below the existing eelgrass beds. Drain placement should seek to impact the least amount of eelgrass habitat possible by either combining the drains or avoiding dense eelgrass beds. Surface contours should be restored and any construction impacts to eelgrass should be mitigated by replanting over the pipeline. (Mitigates 7, 8)
  - b. As an alternative, the "direct to bay" drains should be designed and constructed with effective energy dissipators and flow diffusers which eliminate erosion or accretion of the mudflats and ensure the protection of adjacent eelgrass beds. An expected loss of mudflat totaling not less than 1.7 acres should be replaced within the NWR in a location away from the proposed development area. These ~~The~~ drains and the surrounding mudflats and eelgrass beds should be monitored in accordance with an approved Mudflat and Wetlands Monitoring Plan (Requirement 1) for a period of three five years and any additional corrective measures required should be implemented and any additional impacted areas resulting should be replaced by the creation of a similar area from the uplands of the "D" Street fill or Gunpowder Point. (Mitigates 7, 8)

6. Further studies are required to evaluate the effects of groundwater pumping to fill the proposed lagoon. If these studies indicate that this is not a suitable solution for reasons of contaminants or reduced salinities, a saltwater intake from the bay should be placed in a drain alignment (5.a.) or along a similar low impact corridor and should be separated from the drain at a point below the existing eelgrass beds. Impacts associated with the placement of this system should be mitigated by the creation of a similar amount of new mudflat area rapid restoration of impacted areas. The saltwater outlet Any required discharge or drainage system from the interior lagoons should be to the proposed storm drain system, which flows through a triple baffle trap intended to control contaminants, rather than directly to the bay. (Mitigates 2, 3, 7, 8)
7.
  - a. No "in water" construction shall be allowed during the period of 1 April -15 September to avoid the potential for elevating turbidity in the nearshore foraging and chick training areas of the California Least Tern. No construction activity, earthmoving, or high intensity activity will occur within 200 feet of any salt marsh, freshwater marsh, or mudflat habitat during the period 15 March to 31 August without prior approval by the U.S. Fish and Wildlife Service and California Department of Fish and Game. Further, any other activities which are identified by the biological monitor as having this effect should be precluded from occurring during this period. If it can be demonstrated that the least tern has not yet arrived in south San Diego Bay, or has departed earlier than the specified dates, the applicant or agent may petition the City to modify this timing constraint. The City, acting in consultation with the USFWS shall have the ability to modify this period to reflect the presence of terns during the actual year(s) of construction.
  - b. No construction activity, earthmoving, or high intensity activity will occur within 200 feet of any salt marsh, freshwater marsh, or mudflat habitat during the period 15 March to 31 August without prior approval by the U.S. Fish and Wildlife Service and California Department of Fish and Game. (Mitigates 5, 7, 8, 9)
8. Several desiltation basins and back-up basins large enough to handle storm water runoff should be maintained during the construction phase so that no silts are allowed to leave the construction site. In addition, construction dewatering should be directed into a basin with a filter-fabric, gravel leach system so that clear water is released into a basin. As an alternative, dewatering water should be pumped across the mudflat into the boat channel and discharged at a point above the bottom to avoid resuspending bottom silts, but at a depth of at least 8 feet. (Mitigates 1, 2, 3, 7, 8, 9) (See pages III-39 to III-42 of proposed LCPR No. 3)
9. Fertilizers, pesticides and herbicides utilized within the landscaping areas of the project should be of the rapidly biodegradable variety and may be found on lists of acceptable chemicals provided by the approved for use near wetlands by the Environmental Protection Agency. Further plans required for water quality management, landscape management, and runoff management should be developed in accordance with Requirement 1. (Mitigates 2, 10)
10. All landscape chemical applications should be done by a state-certified landscape contractor. (Mitigates 2, 10)
11. Landscape plant materials to be utilized in the project area should be submitted to the City landscape architect for review. Plant materials which are known to be invasive in salt and brackish marshes such as *Limonium* or *Carpobrotus* species, or those which are known to be attractive as denning, nesting or roosting sites for predators such as *Washingtonia* or *Cortaderia*, should be restricted from use. (Mitigates 4, 5, 6, 9) Landscape plan required to be reviewed at the project level

12. A "biologically aware" construction monitor should be required for all phases of grading and installation of drainage systems. The monitor should be employed through the City and should report directly to a specific responsible person in the Engineering, Planning or Community Development Department should construction activities fail to meet the conditions outlined or should unforeseen problems arise which require immediate action or stopping of the construction activities. This monitor may be desired to continue monitoring on a reduced basis during actual building construction. (Mitigates 9)
13. The proposed development and parks should be designated as a "no pets" area. This means posting all of the parklands/public access areas and imposing fines based on the existing or new City municipal codes, and posting the development areas and including this restriction in all leases and enforcing these restrictions. (Mitigates 4, 5) **Plan required to be reviewed at the project level**
14. Open garbage containers should be restricted and all dumpsters should be totally enclosed to avoid attracting avian and mammalian predators and scavengers to the area. Garbage should be hauled away as often as possible. Citations for open garbage containers should be issued to any entity not complying. Restaurants and park areas are of special concern. (Mitigates 4, 5, 10) **Plan required to be reviewed at the project level**
15. Human access to marshlands and buffer areas should be restricted through fencing and signs. This restriction should be enforced with trespass citations and fines. Specific areas of concern are along the fringes of Vener Pond, and the "E" Street Marsh and Sweetwater Marsh. Additional human/pet encroachment should be restricted through fencing and visual buffers at the mouth of the "F" & "G" Street feeder channel and southeast of the "F" Street/Marina Parkway intersection. (Mitigates 4, 5, 10) **Detailed landscape and buffer design plans required at the project level**
16. A predator management program for the Chula Vista bayfront ~~should will~~ be developed to control domestic as well as wild animal predators. This program should utilize the Connors (1987) plan as a basis, but should be tailored to fit the needs of the proposed development. This plan should include the use of fines as an enforcement tool to control human and pet activities. The plan should be comprehensive and should include management of predators within the adjacent wildlife refuge as well as the proposed development areas. (Mitigates 4, 5, 10) **Detailed plan required to be reviewed at the project level**
17. A full-time enforcement staff of two or more officers should be funded by revenues generated within the bayfront or by other funding mechanisms to conduct the predator management program, ensure compliance, issue citations, and conduct routine checks to ensure maintenance of other mitigation requirements (i.e., silt/grease trap maintenance, etc.). Such officers should work closely with the USFWS in enforcement issues as they relate to Federal Reserve Lands. Officers

should have training in predator control and should possess the necessary skills, permits and authority to trap and remove problem predators. It is recommended that these officers be accountable to the multi-representative Bayfront Conservancy Trust to ensure that multi-jurisdictional conflicts do not impede the effectiveness of the management programs. (Mitigates 1, 2, 3, 4, 5, 6, 7, 8, 10) Detailed plans are required to be reviewed at the project level.

18. Annual funding should be designated for the purpose of trash control, repair and maintenance of drainage facilities, fencing, the predator control program, and mitigation programs for the project. (Mitigates 1, 2, 3, 4, 5, 6, 7, 8, 10)
19. Conversion of the small brackish water marsh to a freshwater detention basin would reduce, but not eliminate, the resource values of this pond. These values should be reclaimed through the creation of additional salt and brackish marsh within the "F" & "G" Street Marsh area and the area between the "F" & "G" Street Marsh and San Diego Bay. No fewer than 3.5 acres of Brackish Marsh and 4 acres of Salt Marsh should be created in this area. In addition, tidal flushing should be enhanced as identified in the Wetlands Research Associates restoration plans (1987). Further, if marshlands are to be created, as proposed, on both sides of Marina Parkway, undercrossing areas which remain dry during high tide would be required. It is suggested that large half-round corrugated culverts of a 10 foot or more radius be considered for this purpose. Other options might also be suitable. This restoration will also assist in mitigating a portion of the human encroachment impacts identified by expanding the area and value of the existing marshlands. (Mitigates 1, 4, 6)
20. No further dredging, structural changes, or proposed uses should be allowed to occur along the mudflat or marshland areas of the bayfront. This includes such activities as marinas, water sports courses, etc. Additionally, the developer, City, and USFWS should jointly seek to have the San Diego Unified Port District post a line of buoys to limit access in the mudflat and marsh areas. (Mitigates 4, 5, 6, 7, 8)
21. Buildings should utilize non-reflective glass and bold architectural lines which are readily observable by birds. A film glass manufactured by 3M is recommended. (Mitigates 5, 6) Plan required to be reviewed at the project level
22. Buildings facing marshlands should not include extraneous ledges upon which raptors could perch or nest. Additionally, roof peaks and crests which are exposed to the wetlands should be covered with an anti-perch material such as Nixalite. A commitment to correct any additional problem areas should be obtained should heavy incidence of perching be observed or should nest building by raptors be initiated on the buildings or in landscaping materials. (Mitigates 5, 6) Plans require review at the project level
23. Park uses within the lower third of the 6.8-acre park zone at the "F" & "G" Street Marsh feeder channel should be limited to passive use and should include such features as abundant native shrubland restoration, which would preclude active

recreation in this area. Park and buffer areas along the "E" Street Marsh and Vener Pond should be designed to include a visual and human encroachment barrier between active recreation areas and the marshlands. This could be best accomplished using a vegetated berm separated from a lowered recreation area ("pits") by a fence. Passive overlooks could be incorporated on the development side of the recreational "pits." This would provide both a visual screen between the marsh and the high human activity as well as a distance separation between passive observation areas and the marshlands. Both needs would be met by this design approach. (Mitigates 4, 5, 10) Buffer area landscape plans require project level review

24. Kite flying activities result in high avian disturbance due to the kites being perceived as predatory birds and thus should be prohibited from parkland areas adjacent to wetlands or bay mudflats. (Mitigates 4, 5)
25. Public awareness signs explaining the resources, concerns and prohibited activities should be prominently posted throughout the affected parklands. (Mitigates 1, 2, 3, 4, 5, 6, 7, 8, 10)
26. New marshland, ~~mudflat~~ pond fringe and salt pond habitats totaling no fewer than 13.2 acres should be created on the more isolated western portions of Gunpowder Point, ideally, with marsh linkage to both the "E" Street Marsh and Sweetwater Marsh to aid in off-setting impacts associated with encroachment, predation, and loss of habitat use by avian species. These 13.2 acres would replace the ~~loss of some of the values associated with the 3,840-foot length of marshland fringing the "E" Street Marsh, Vener Pond, and Sweetwater Marsh~~ that would be impacted by predator/competitor threats. ~~The impacts are expected to extend 100-150 feet from the marsh edge. The total area potentially impacted would be 13.2 acres. The types of habitat impacted should be replaced at a 1:1 ratio.~~ and encroachment pressures. (Mitigates 4, 5, 6)

#### Analysis of Significance

Numerous impacts were cited to biological resources, including wildlife resources, threatened and endangered species and marine resources. Mitigation measures would mitigate the expected construction impacts of the proposed project and would mitigate impacts of human encroachment to a less than significant level if properly implemented and well enforced. These recommendations would mitigate the impacts of the project on marine resources and drainage and water quality as these issues relate to biological resources.

~~These measures would be of great benefit but would not completely mitigate impacts of the project on wildlife resources. Of primary concern are the effects of increased predator presence, specifically in the areas of wetlands fringing the Midbayfront. Included in this is the creation of threats to nesting by the Belding's Savannah Sparrow and Black-necked Stilt. In addition, increased predation upon Light footed Clapper Rails and possibly the California Least Tern Colony could potentially result from raptors utilizing these buildings. Minor, or~~

~~even major movements of these buildings within the bayfront could potentially reduce these impacts, but is not likely to lessen them to a less than significant level. Further, since the potential for contaminant discharge cannot be estimated at this time, this impact is considered to be significant and unmitigable until additional information from studies is available.~~

The project description, environmental safeguards and these mitigation measures provide adequate assurance, at a plan level, that impacts associated with alterations of predator, competitor, and prey regimes, endangered species concerns, and vector control issues may be mitigated at the project level by the development and implementation of precise plans which address these concerns. Currently, there is not enough project-level detail available to adequately evaluate significance on these issues. So, the impacts identified above remain significant and not mitigated at the plan level. Finally, there are no foreseeable mitigation measures available to compensate for the loss of raptor foraging habitat associated with the alteration of land uses in the Midbayfront. This impact is considered significant and unmitigable.

### 3.8 ARCHAEOLOGY/HISTORY/PALEONTOLOGY

#### Existing Conditions

The existing setting in the Midbayfront project area has been disturbed, due primarily to recent agricultural uses, including cultivation of fields and the use of greenhouses. Very little of the original ground surface has been left undisturbed.

#### Archaeology/History

The cultural resource study included tasks that focused on both the gathering of existing information concerning archaeological resources in the area, and on the discovery of additional resources within project boundaries. The study was conducted in accordance with the guidelines of the City of Chula Vista and the California Public Resources Code (Sec. 21083.2) for the identification and evaluation of cultural resources. This section is a summary of the complete archaeological report (see Appendix D) prepared by Brian F. Smith and Associates. The report was completed according to the format provided in "Recommendations for Reporting Cultural Resource Investigations" (June 1980), compiled by the California Office of Historic Preservation. The specific tasks of the scope of work were as follows:

- Archaeological record searches were conducted at the South Coastal Information Center at San Diego State University and the San Diego Museum of Man, and a literature review was completed to access all pertinent information
- A reconnaissance of the 135-acre parcel was performed to record all evidence of archaeological resources, and to confirm the locations of previously documented sites
- The cultural resources present within the project area were evaluated, based on the surface collection of artifacts and subsurface excavations to search for cultural deposits
- The sites were analyzed using the field data to determine whether the proposed use of the project would constitute an adverse impact to the archaeological sites, and mitigation measures were compiled where warranted

Archaeological record searches indicated that eight sites were previously recorded within the vicinity of the project. The sites include one lithic scatter, one major camp, two temporary camps, three shell and lithic scatters, and one historic site. The record searches documented the presence of one previously recorded site, SDi-5512, within project boundaries in the northeast corner. In addition, Site SDi-6025 was recorded along the eastern boundary of the project.

A series of archaeological reports was reviewed as part of the project study to evaluate the types of resources documented in the general vicinity of the project. Studies which identified archaeological resources on or near the project include the following:

- "Final Environmental Impact Report for the Bayfront Specific Plan" (RECON, 1985)
- "Extended Archaeological Survey for Proposed San Diego Bay Route Bikeway Project in San Diego County" (CALTRANS and SDSU - Leach and Pettus, 1979)
- "Environmental Setting/Constraint Analysis for the Chula Vista Bayfront Redevelopment Project" (Westec, Inc. - Carrico, 1976)
- "Cultural Resources Reconnaissance of the San Diego Fixed Guideway Project, Centre City to San Ysidro" (Westec, Inc., 1978)
- "Proposed Archaeological Phase II Excavation at SDi-8873H" (CALTRANS - DeCosta, 1981)
- "SDM-W-1323, Archaeology of a Site on Gunpowder Point" (RECON, 1977)

The review of the pertinent literature revealed that the general vicinity has been subjected to several previous surveys that resulted in the recording of both historic and prehistoric sites. This information was used in the evaluation of the sites within the project. Previous studies have noted that modern impacts have included the use of the area for cultivation and industrial purposes, and the alignment of transportation corridors for the railway and highways, all of which have resulted in a general reduction in the integrity and potential significance of cultural resources in the vicinity.

The field reconnaissance of the project resulted in the documentation of six areas of archaeological concern. These areas included one potentially sensitive structure, two historic dump scatters, and three areas of scattered prehistoric artifacts. All of the prehistoric and historic artifact scatters have been disturbed by grading, cultivation, road traffic, and recent trash dumping. After a review of the applicable literature and record searches were conducted, the sites identified within the project have been interpreted as extensions of the previously recorded archaeological sites that border the project. Essentially, the on-site resources represent loci or areas of distinct manifestation that are a continuation of the previously recorded sites. Because of the continuity of the pattern identified both off and on site, materials within the project area have been recorded as loci of the previously recorded sites, and the site records at San Diego State University or the San Diego Museum of Man have been updated and adjusted to reflect the additional information. The cultural resources located within the project include the following:

- SDi-5512A - Lithic/shell scatter
- SDi-5512B - Lithic/shell scatter

- SDi-5512C - Lithic/shell scatter
- SDi-6025B - Lithic/shell scatter, mixed with historic materials
- SDi-6025C - Primarily historic materials, mixed with prehistoric lithic artifacts
- SDi-6025D - Primarily historic materials, mixed with prehistoric lithic artifacts
- The Shangri-La Restaurant (not recorded with the clearinghouse as it was found to not meet the threshold for consideration as a historic site)

The prehistoric sites present within the study area generally consist of widely dispersed lithic scatters with very small quantities of artifacts and no indications of a central lithic concentration or subsurface deposit. It appears that the artifacts have been spread by grading and cultivation, and the integrity of the sites is considered to be either very poor or nonexistent.

The Shangri-La Restaurant is a Chinese-style structure which has been partially preserved within an industrial office complex at the southwestern corner of the project. The structure has an eclectic design with a distinct Oriental orientation. The area was surveyed to determine the age and potential significance of the structure and whether any sensitive architectural features were present. Based on the evidence gathered, the structure is considered to be relatively modern (i.e., between 30 and 40 years old) and lacks any architectural sensitivity. Although the old Shangri-La Restaurant is an interesting building, no historical significance could be attributed to it.

### Paleontology

This section is a condensed version of the complete paleontological report prepared by PaleoServices, and included in this EIR as Appendix E.

The paleontological assessment is based upon a review of published geologic reports (Kennedy and Tan, 1977) and museum paleontological locality records (U.C. Berkeley-Museum of Paleontology, and San Diego Natural History Museum-Department of Paleontology). In addition, a field survey of the site was made by Thomas A. Deméré of PaleoServices to determine the fossiliferous nature of any existing exposures of geologic deposits.

The proposed project site is located in the low bluff area west of I-5 and east of San Diego Bay. The site has experienced some limited prior development in the form of buildings and roads but none of this earlier development involved extensive earth moving. The site is presently covered by soil and vegetation which combine to effectively obscure the underlying geologic deposits. The only bedrock exposures available in the area occur along the "E" Street off-ramp from south bound I-5 and in the low bluffs of Gunpowder Point. Elevations range from sea level to about 25 feet. The project area includes some of the only natural high ground in the Chula Vista coastal wetlands region.

As summarized on the National City, CA, 7.5 minute USGS quadrangle geologic map of Kennedy and Tan (1977), the general geology of the project site consists of Recent tidal flat deposits related to the present San Diego Bay and possibly Pleistocene-aged (last 2 million years) alluvial and/or nearshore marine deposits (mapped as the Bay Point Formation by Kennedy and Tan, 1977).

The spacial distribution of these deposits as plotted by Kennedy and Tan (1977) can be used to determine the geology of particular areas within the project site. This is important from a planning standpoint as the distribution of paleontological resources (fossils) is directly related to the distribution of the geologic layers within which the fossils are buried. No fossil localities are known from the project site and none was discovered during the field walk over. Similar deposits in the National City area, however, have produced rare remains of fossil land mammals (Stock, 1944). In addition, newspaper accounts from 1963 report the finding of fossil mammoth remains in alluvial deposits of the Tijuana River near Nestor.

It is important to point out that many fossil sites presently on record in San Diego County have been discovered only during residential development activities or during highway and freeway construction projects. This close correlation between fossil sites and construction is due to the fact that surface weathering quickly destroys most fossil materials. It is not until fresh unweathered exposures are made by grading that well-preserved fossils can often be recovered. Also, because of the amount of grading proposed for some sites, odds are increased that this grading will unearth rich fossil horizons.

In addition to this, knowing the past fossil potential of a particular geological "layer" in one area is a reliable method for determining the resource potential of that "layer" in other, perhaps unexplored, areas.

With this in mind, it is suggested that the project site possesses a potential for producing significant paleontological resources. Presently this potential is unproven but development of the site will ultimately determine the reality of this potential.

### Impacts

#### Archaeology/History

The following are summary site descriptions for each of the archaeological resources potentially impacted by the development project. Artifact types and totals removed from the sites during the evaluation process are provided.

#### Site SDi-5512A

SDi-5512A is a previously recorded site that extends from the northeast property corner toward the center of the project. The site is characterized by a sparse scatter of artifacts and ecofacts (shell) located on a west-facing, gentle slope, and measuring approximately 1,050 feet along a southwest-northeast axis, and 650 feet along a northwest-southeast axis. The surface of the site indicated that the area had previously been disturbed by farming activities and land modification, reducing the surface integrity of the resource. Surface

artifacts recovered from SDi-5512A included 15 scrapers, 1 domed scraper, 6 choppers, 20 utilized flakes, 1 perforator, 2 blades, 1 mano, 1 pounder, 19 flakes, and 1,312.1 grams of shell material.

The subsurface testing at SDi-5512A was conducted through the excavation of two one-meter-square test units which produced a small recovery of shell (21.8 grams). However, no artifacts or indications of subsurface deposits were observed, indicating that the cultural resource consists of a light scatter of surface artifacts.

#### Site SDi-5512B

SDi-5512B is an artificially detached portion of the previously recorded site, SDi-5512A, and is characterized by a sparse scatter of artifacts and ecofacts (shell) measuring approximately 550 feet south to north, and 400 feet west to east, on a west-facing, nearly level slope. The surface of the site indicated that the area had previously been disturbed by farming activities and land modification which have reduced the surface integrity of the resource. Surface artifacts recovered from SDi-5512B included 2 scrapers, 3 utilized flakes, 1 flake, and 42.3 grams of shell. Subsurface testing at SDi-5512B was conducted through the excavation of a single one-meter-square test unit, which produced no artifacts or indications of subsurface deposits. The locus appears to consist of a light scatter of surface artifacts without a subsurface deposit.

#### Site SDi-6025B

SDi-6025B is a widespread scatter of artifacts and ecofacts (shell) located on a west-facing, gentle slope which measures approximately 750 feet south to north, and 550 feet west to east. The characteristics of the surface of the site indicate that the area had previously been disturbed by farming activities and land modification which have reduced the surface integrity of the resource. The surface materials recovered from SDi-6025B included 8 scrapers, 1 chopper, 2 hammerstones, 5 utilized flakes, 1 retouched flake, 1 mano, and 13 flakes. Two one-meter-square test units were excavated, which produced a small recovery of shell (1.0 gram). With the exception of a single flake, no other artifacts or indications of subsurface deposits were observed, indicating that SDi-6025B consists of a light scatter of surface artifacts.

#### Site SDi-6025C

SDi-6025C is a dump site situated on a gentle slope on the southern side of the 25-foot terrace located in the center of the project. SDi-6025C represents the historic component of cultural materials associated with the widely dispersed scatter of historic and prehistoric materials designated as SDi-6025A, B, and C. The surface artifacts recovered from SDi-6025C included 724 historic items consisting of household and farm materials. The dominant materials in the assemblage were household items such as ironstone ware, including decorated ceramic plateware, undecorated white tableware, crockery, glassware, and window glass. Very few building materials, such as nails and wood, asphalt or concrete, were observed. Food bone was also absent from the collection. Also lacking was debris from businesses, such as wire, metal fragments, tin, or tools. Subsurface testing at

SDi-6025C consisted of two one-meter-square test units. The units were excavated to a depth of 20 centimeters, producing a recovery of 31 historic artifacts.

The investigations at SDi-6025C indicate that the cultural resource consists of a light surface scatter and an equally diffuse subsurface cultural deposit of historic artifacts. The recovered artifacts are representative of urban neighborhoods located to the east of the site. The deposit of materials has been impacted by land uses which include cultivation, grading, and recent dumping. These impacts have significantly reduced the integrity and essentially eliminated any further research potential of the site.

#### Site SDi-6025D

SDi-6025D is a light, dispersed surface scatter of historic and prehistoric artifacts situated in the level area directly adjacent to the shoreline in the westernmost portion of the project. The surface artifacts recovered from the site include both historic household items (such as ironstone ware, undecorated white tableware, bottle fragments, and window glass) and manufacturing industrial materials (including coal, slag, and a large iron crucible from a foundry) as well as a small quantity of prehistoric artifacts. The prehistoric artifacts included six flakes, three scrapers, and one chopper. Subsurface testing at SDi-6025D consisted of the excavation of two one-meter-square test units, producing only one lithic flake. Site SDi-6025D consists of a light surface scatter of historic and prehistoric artifacts; no subsurface deposits were detected.

#### **Paleontology**

Impacts to significant paleontological resources occur when earth work activities, such as mass excavation projects, cut into geological deposits (formations) within which fossils are buried. These impacts are in the form of physical destruction of fossil remains. Since fossils are the remains of prehistoric animal and plant life they are considered to be non-renewable. Therefore such impacts are significant and, under CEQA guidelines, require mitigation.

As discussed above, the project site is underlain by geological formations which possess a potential for containing important paleontological resources (fossils). Impacts may occur when the site is graded as earth moving activities cut into the potentially fossil-bearing layers noted above.

#### Mitigation

#### **Archaeology/History**

The field investigation of the resources within the Chula Vista Midbayfront project area has provided a sufficient level of data to record site characteristics and evaluate the resources as non-significant based upon their lack of research potential and the absence of important features which would form the foundation for an evaluation of significance. Sites SDi-5512B, SDi-6025B, and SDi-6025D are characterized as surface scatters of materials which have no further research potential. Sites SDi-5512A and SDi-6025C both contain

shallow subsurface deposits which have been impacted by cultivation and grading, and do not retain any subsurface integrity or potential for significant subsurface deposits. The completed collection of surface and test-unit artifacts as part of the site recordation process is considered sufficient mitigation based on known site information.

### Paleontology

Mitigation of the impacts discussed above can be ensured by implementing the following measures.

- A qualified paleontologist should be at any pre-construction meeting to consult with the grading and excavation contractors.
- A paleontological monitor should be on site on a half time basis during the original cutting of previously undisturbed sediments of the deposits mapped as Bay Point Formation to inspect cuts for contained fossils. If the deposits are discovered to be fossiliferous then monitoring should proceed; if on the other hand they turn out to be barren colluvial deposits then monitoring should not be continued. (The areal distribution of these deposits is summarized on the geological map of Kennedy and Tan, 1977.)
- In the event that well-preserved fossils are discovered, the paleontologist should be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovering of small fossil remains such as isolated mammal teeth, it may be necessary to set up a screen-washing operation on the site.
- Fossil remains collected during any salvage program should be cleaned, sorted, and cataloged and then, with the owner's permission, deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum.

### Analysis of Significance

#### Archaeology/History

The proposed project and Alternatives 2, 3, 4, 5, 7, 8 and 9 represent variations in the area, intensity and zoning of portions of the LCP. As the alternatives all incorporate the Midbayfront area within the designated zone of development, the cultural resource analysis was conducted under the assumption that the project and all of the alternatives represented a source of potential direct impacts to archaeological sites. While the project and the alternatives will all ultimately result in additional impacts to archaeological sites SDi-5512A and B, and SDi-6025B, C, and D through the grading of the area, the impacts will not be significant.

The basis for this evaluation is the fact that the archaeological sites are non-unique and do not retain any potential for research or include any culturally sensitive features or deposits.

The Shangri-La Restaurant building was studied and evaluated as a relatively modern structure (built in the 1950s) which has the appearance of an older structure, but actually does not possess any sensitive architectural features of historic importance. Impacts to this structure have been evaluated as less than significant.

Any development outside of the project boundaries could impact adjacent archaeological sites and, therefore, all off-site improvements should be subjected to archaeological review.

### Paleontology

As noted above, significant impacts to paleontological resources could occur during project grading from the proposed project and Alternatives 2, 3, 4, 5, 7, 8 and 9. Implementation of the following recommended mitigation measures would eliminate these potential impacts.

- A qualified paleontologist will be present at any pre-construction meeting regarding grading techniques, and should be present on site (half-time) during original cutting of sediments; if fossiliferous materials are found, monitoring should continue, otherwise monitoring should be discontinued.
- If fossils are discovered, a paleontologist will be allowed to temporarily divert, direct or halt grading to recover the resources.
- Fossil remains should be cleaned, sorted, cataloged, and deposited as appropriate.

### **3.9 LAND USE/GENERAL PLAN ELEMENTS/ZONING**

#### **Existing Conditions**

The existing land use conditions section describes the land uses that are presently located in and surrounding the LCPR No. 8 area, and discusses the planning documents that designate allowable uses in the project area. Located in the northwestern section of the City, the project area is directly east of and adjacent to the San Diego Bay. The City of National City corporate limits lie approximately 300 feet to the north.

#### **Existing Land Use**

##### **LCPR No. 8**

The LCPR No. 8 area is predominantly composed of wetlands and low lying areas associated with the San Diego Bay. Existing land uses on site are as follow:

- **Chula Vista Nature Interpretive Center** - located in the northwest section of the project area, the Interpretive Center offers visitors a look at the natural history and ecology of California wetlands
- **Rayne Water Systems Company** - located at the end of "F" Street in the southwestern part of the project area, this company treats bay water to provide high quality water for industrial applications
- **Unoccupied Restaurant and Convention Facility** - located at the end of "F" Street in the southwestern part of the project area, the abandoned Shangri-la restaurant is now used for a boat building business
- **Abandoned Green Houses** - located in the eastern section of the project area, near the end of "E" Street. Approximately 11 acres of abandoned greenhouses exist on the property
- **Remaining Project Area** - The rest of the project area is open space consisting of grasslands, wetlands and salt marshes.

#### **Surrounding Area**

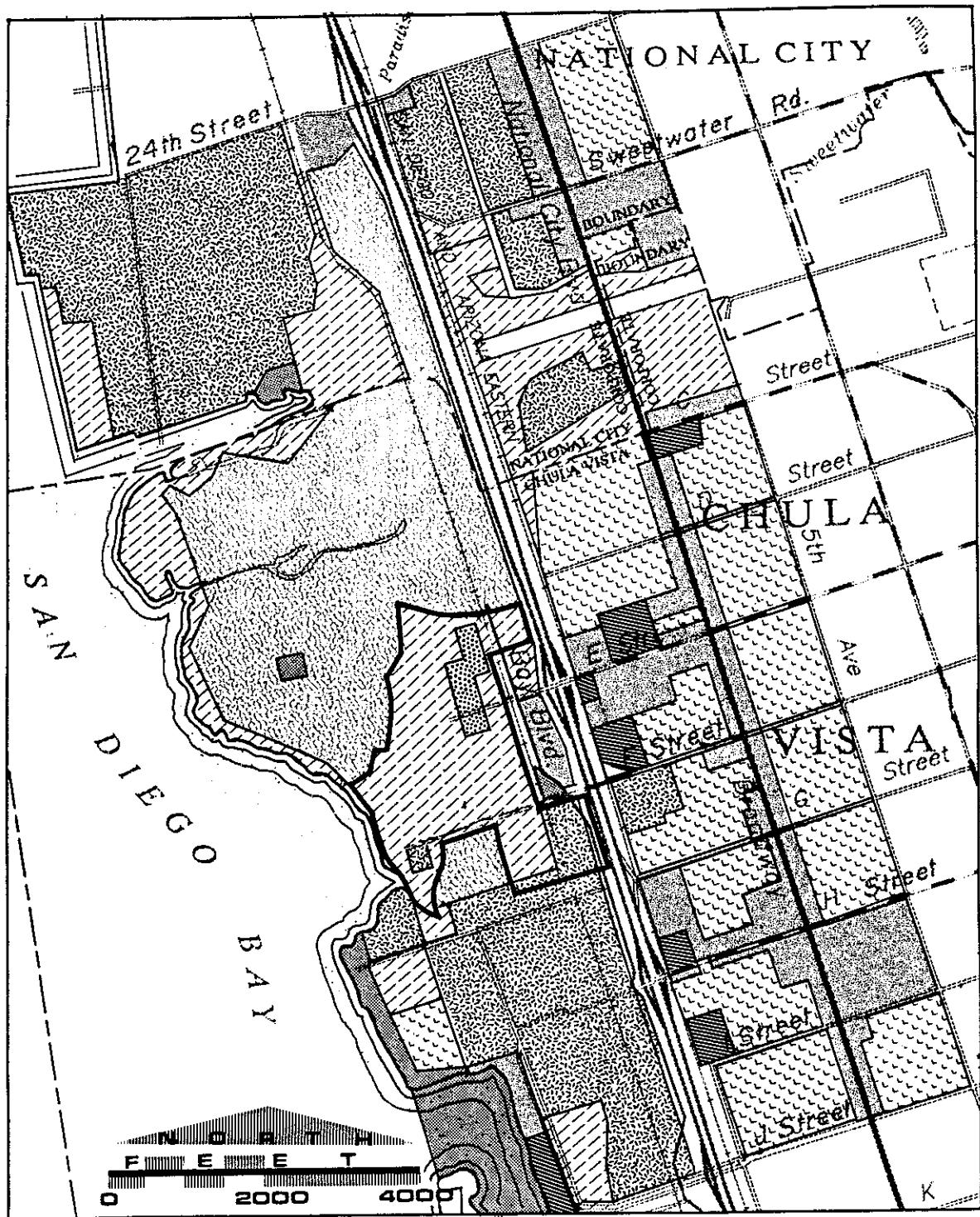
Existing and surrounding area land uses within .5 mile of the project site are shown on Figure 3-VII. Uses include residential, commercial, industrial, public and quasi-public, park and recreation and open space.

#### **Land Uses North of LCPR No. 8**

Land uses to the north in National City include industrial, park and recreation, and open space uses. Approximately 500 feet east of Tidelands Avenue to the northeast of the project area is a large open space that borders I-5 and extends north for approximately 2,000 feet.



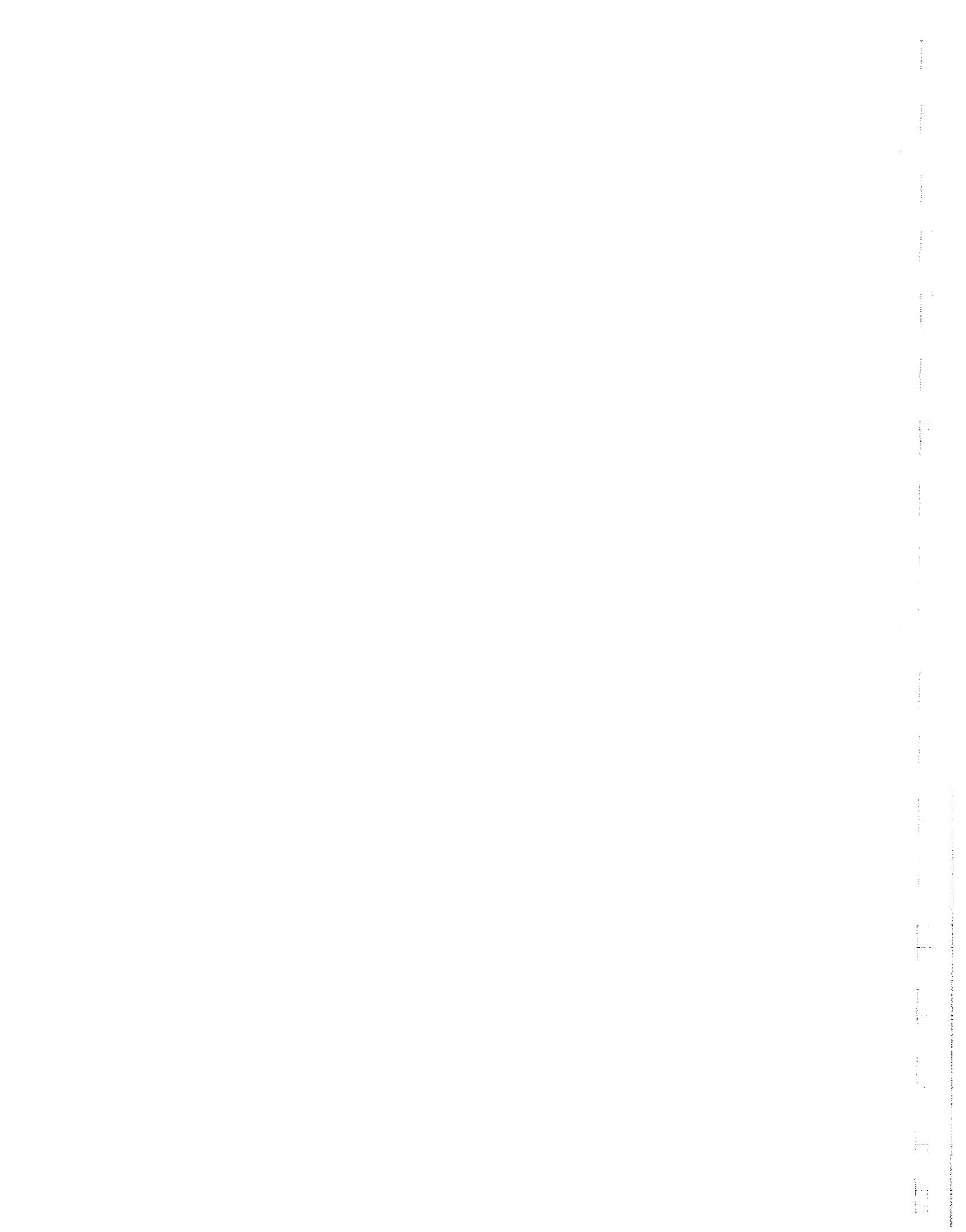
**UP RESUMMITAL #8**



- |                       |                          |
|-----------------------|--------------------------|
| Residential           | Public/Quasi-Public      |
| Commercial            | Open Space               |
| Industrial            | Parks                    |
| Abandoned Agriculture | National Wildlife Refuge |

**EXISTING LAND USE**

Figure 3-VII



It contains Paradise Creek and surrounding marsh land. Moving west there is a small park known as the L.M. Pepper Park which includes a park area, parking lot and boat launching ramp. West of the park is the Sweetwater Wharf. It has a 1400 foot-long wharf and is used almost exclusively for landing large shipments of lumber. Continuing westerly across Terminal Avenue, there are two large buildings for marine industrial use, which are presently vacant. West of the buildings is a large open space that extends north adjacent to San Diego Bay for approximately 1,200 feet. North of this is the National City Marine terminal which handles the loading and unloading of ships for such materials as scrap metal and petroleum products. The remaining areas west of Terminal Avenue and south of 24th Street are used almost exclusively for storage, assembly and handling of lumber and wood products. Also spread throughout this area are other warehousing and manufacturing uses such as fuel storage facilities, cold food storage locker, wholesale building supply, ice manufacturing plant, a food processing facility and freight distribution business.

#### Land Uses South of LCPR No. 8

Land uses to the south include industrial, commercial, park and recreation, and open space uses. Directly southwest and adjacent to the project area is the South Bay Boat Yard, California Crane and Rigging, and Swath Ocean Systems, Incorporated. All three are boat building and maintenance related businesses. To the south and southwest are areas of open space and a public park extending south adjacent to the San Diego Bay. South of the vacant land and east of the bayside park is the Chula Vista R.V. Resort, which can accommodate 237 recreational vehicles for short-term periods of time. South of the R.V. park, the "J" Street Marina extends south for approximately 900 feet. The marina includes boat slips, a parking area, and commercial uses associated with the marina. Directly south of the marina is a large open water area where boats can be launched from the "J" Street extension. The "J" Street extension includes a boat ramp, parking area, open space facing north, and a park area that extends east to Bay Boulevard. North of this park is a large open space adjacent to Rohr Industries. Rohr facilities extend north from "J" Street all the way to the project boundary, and include buildings, offices and parking.

#### Land Uses East of LCPR No. 8

Land uses to the east, including those directly east and southeast within the Chula Vista city limits, and northeast within the National City city limits, are residential, commercial, public and quasi-public, industrial and open space areas. Three restaurants and a motel/restaurant are located directly east of the project site on Bay Boulevard between "E" and "F" Streets. The remaining uses are separated from the project area by I-5, which, because of its size, virtually isolates the project area uses from these other easterly uses. Figure 3-VII, above, shows all of these land uses within .5 mile of the project site.

#### General Plan and Zoning

This section of the EIR describes the current plans, policies and zoning designations for the project and surrounding areas. Plans applicable to the project area include the Chula Vista LCP, and the recently adopted *Chula Vista General Plan (Update)* - 2010. The General Plan incorporates the City's LCP which outlines development within the project area. With

respect to other jurisdictions' policy documents, the *City of National City General Plan* adopted in 1983, and the *San Diego Unified Port District, Port Master Plan* adopted in 1980 address lands to the north, northeast, west and southwest of the project area.

#### Chula Vista Bayfront Local Coastal Program

The Coastal Act of 1976 requires that every coastal city and county prepare an LCP to be submitted to and approved by the California Coastal Commission. The Act defines an LCP as "a local government's land use plans, zoning ordinances, zoning district maps, and implementing actions which, when taken together, meet the requirements of, and implement the provisions and policies of the Coastal Act at the local level."

The LCP is the major planning document for the project site, as it supersedes all other planning documents for the area, and is incorporated into the *Chula Vista General Plan (Update) - 2010*.

Land uses allowed under the LCP for the project area are shown on Figure 2-X, and are included in the EIR for analysis purposes as Alternative 2, Existing Certified LCP (Figure 2-VI). As shown on these figures and Table 2-1, the LCP allows for residential, office, commercial, light industrial, and park and recreational uses within the Subarea 3 portion of the project area (Midbayfront). The LCP also allows for residential, commercial, public and quasi-public, and parks and recreational uses, and industrial for the remainder of the project area.

Basic Land Use Objectives stated in the LCP include: (1) mixed uses which would include residential, commercial/recreational and public parks; (2) an integration of the bayfront into a single compatible mixed use development; (3) excluding general industrial development from the Midbayfront area, but allowing it in the existing industrial areas adjacent to Rohr Corporation and the SDG&E facilities; (4) protection and enhancement of the wetlands areas; and (5) provision of adequate public open space and park land while protecting wildlife resources from disruptive intrusions. Specifically, the permitted land uses in the LCPR No. 8 area are as follow:

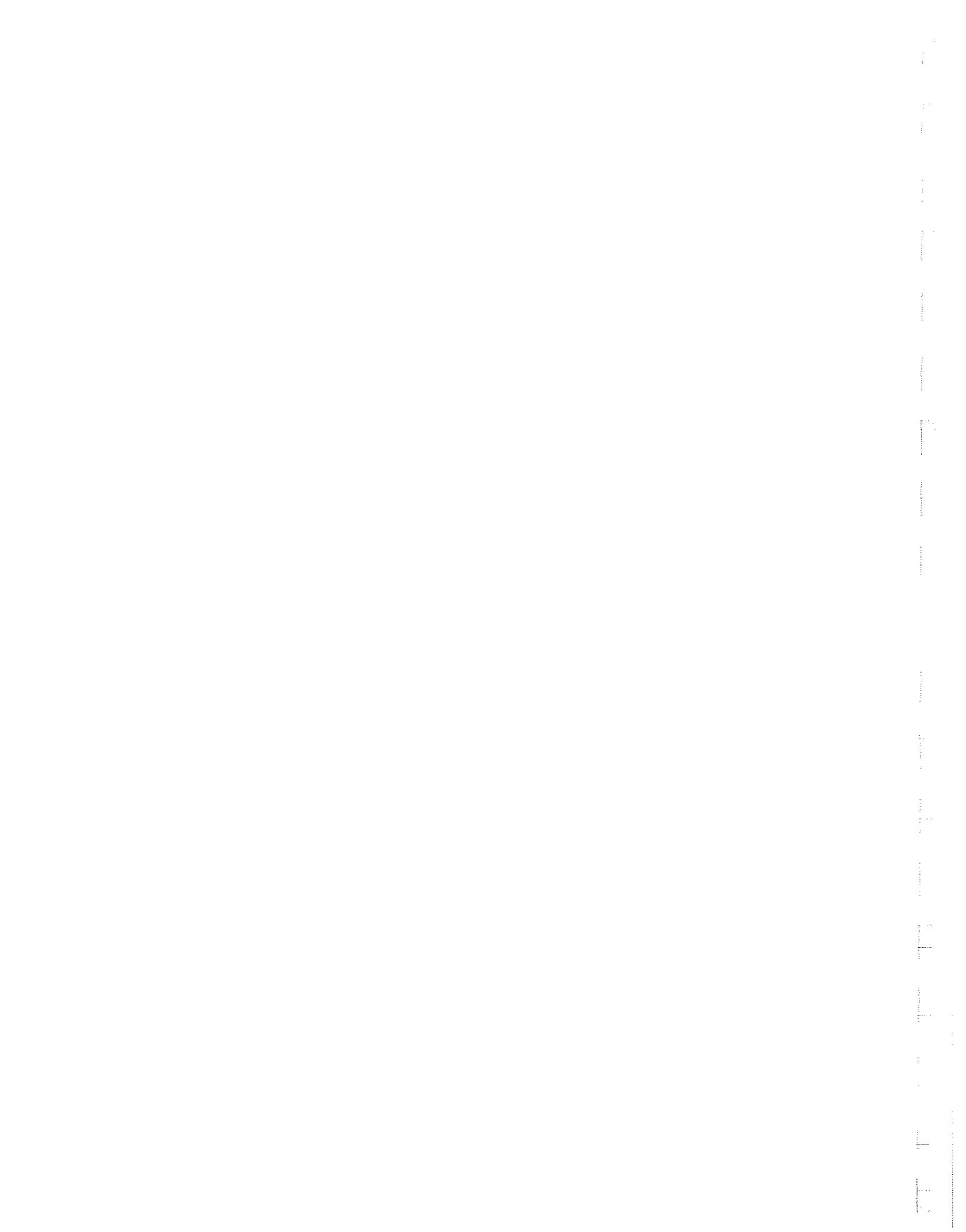
- **Industrial** - The industrial land use will be confined to an area generally south of "G" Street. Also, the LCP Land Use Element map shows industrial to extend approximately 400 feet north of "G" Street. Industrial "Business Park" is shown bounded by "F" and "G" Streets, and the "F" & "G" Street Marsh and I-5.
- **Residential** - Residential uses will be limited to high density multiple-family dwellings of varying size and configuration.
- **Landscaped Parking** - Portions of the San Diego Gas and Electric powerline right-of-way that run the length of the planning area shall be improved with landscaped parking areas.

- **Commercial** - Sub-designations include office park within the Midbayfront; highway related adjacent to I-5; marine related in the waterfront areas; specialty retail designed to support the hotel-conference facility, adjacent office park, and adjacent residential uses; and motel, designed as a destination resort hotel with conference facilities.
- **Public Open Space** - Public open space refers to all physically accessible and visually accessible open lands for public use. Sub-designations include wetlands -- including existing, restored, enhanced, or newly created salt marshes, ponds, and mudflats; wetland buffers -- including buffer zones adjacent to wetlands required for habitat protection; upland resources including the Least Tern Reserve and the upland vegetation zone on Gunpowder Point; and parks that would be established throughout the bayfront.

#### General Plan (Update) -2010

The Land Use Element of the *Chula Vista General Plan (Update) - 2010* provides a long range guide for the development and use for all lands within the planning area, including the bayfront and project area. The Land Use Element sets out clear standards for intensity of development, which is a requirement of local general plans pursuant to California Planning and Zoning Law. The adopted General Plan land use designations are consistent with the LCP designations for the project area. The LCP designations and General Plan designations outside the LCP boundary for the surrounding area are shown on Figure 3-VIII and are as follow:

- **Residential Medium-High** - Multi-family units allowing 11 to 18 dwelling units per acre
- **Commercial Retail** - Neighborhood, community and regional shopping centers; retail establishments and service commercial
- **Commercial Visitor** - Transient lodging such as hotels and motels, commercial recreation, restaurants and retail establishments
- **Commercial Professional and Administrative** - Professional and administrative office use. Limited retail which serves nearby office employees is also permitted
- **Industrial Research and Limited Manufacturing** - Research and development, light manufacturing, small scale warehousing and flexible-use buildings
- **Future Parks** - Parks and recreation and community centers, and large plazas and courtyards that exist independently of adjacent buildings
- **Open Space** - Space for limited recreation, floodplains and mountain areas



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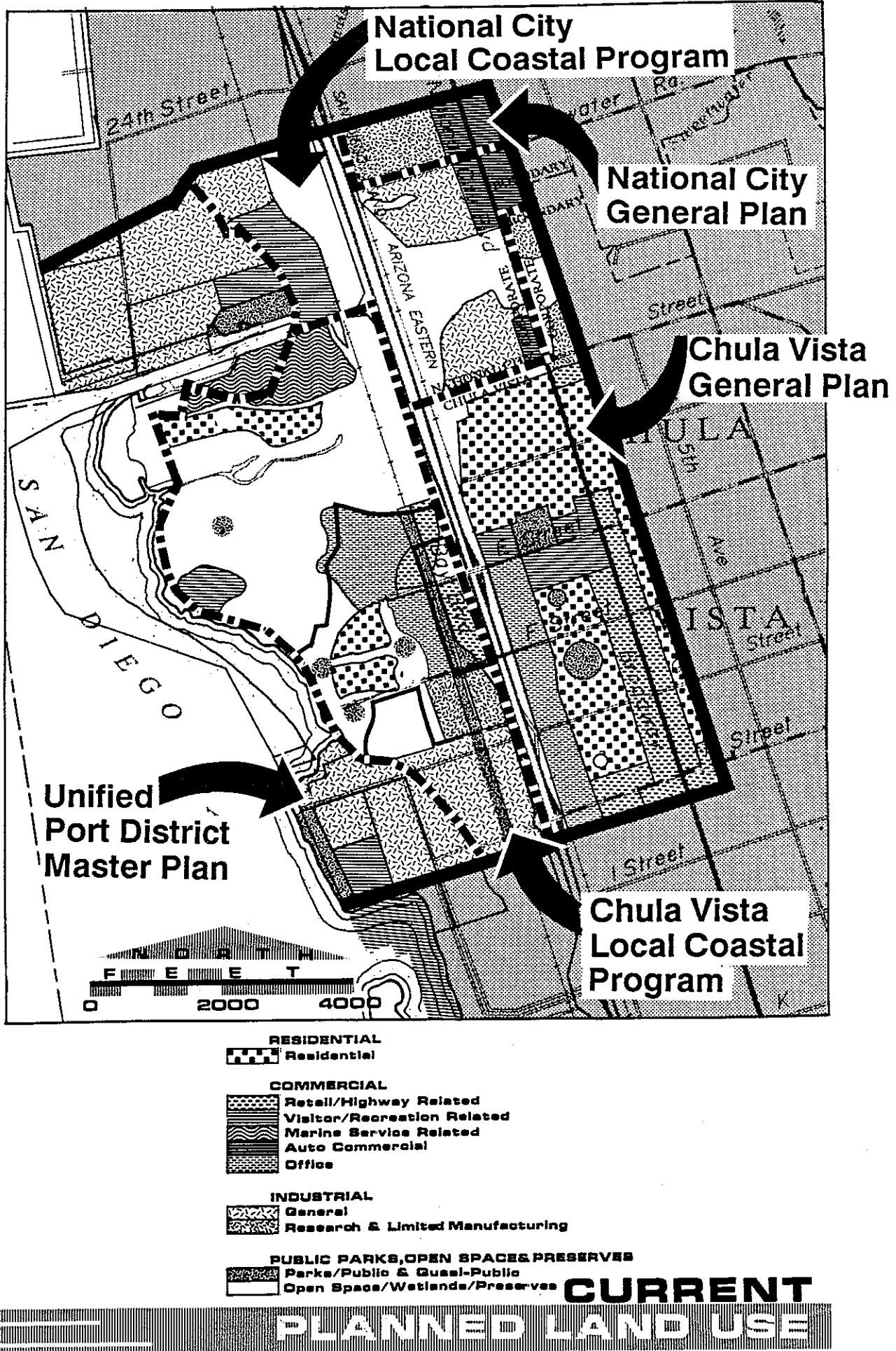


Figure 3-VIII



## Redevelopment Plan

The City of Chula Vista, under the direction of the Chula Vista Redevelopment Agency, adopted the *Chula Vista Bayfront Redevelopment Plan* in 1974. The City is currently preparing an amendment to the Plan for the Bayfront area; the Draft Redevelopment Plan for the Chula Vista Bayfront Redevelopment Project (June 1, 1990) updates Redevelopment Agency objectives, policies, permitted land uses and other pertinent management strategies for this area of the City. The Redevelopment Plan provides guidelines for development within the project area. The Redevelopment Plan states that primary use of the project area should be limited generally to commercial recreation-oriented uses such as hotels, motels, restaurants, and public parks and recreation activities. Other uses such as residences and office uses would be allowed if they complemented the commercial recreation uses.

## Zoning

The Bayfront Specific Plan acts as the zoning code for the LCP area, including the project area. "The purpose of the Chula Vista Bayfront Specific Plan is to implement the Chula Vista General Plan and Bayfront Land Use Plan .... The Specific Plan shall supersede the Chula Vista Zoning Ordinance..." (Chula Vista Bayfront Specific Plan, 1989). Relevant excerpts from the Specific Plan regarding development in the project area include:

- **Residential Density** - The minimum residential density shall be 15 dwelling units per acre, and the maximum residential density shall be 30 dwelling units per acre, provided however, that such measurements shall be taken in the aggregate for larger parcels permitting the transfer of unused density on internal developed areas to other portions of the site.
- **On-Site Parking** - Parking included as part of a private development shall be located in areas away from the shoreline and public open space corridors and, where feasible, screened from view from major arterials by use of landscaped berms and tree planting. Where possible, large-scale parking shall be avoided in favor of small disaggregated parking areas separated by buildings or landscaping.
- **Landscaped Parking in the SDG&E ROW** - Where parking is incorporated into the SDG&E ROW, the following bonus provisions shall apply: The parking areas shall be landscaped with a continuous perimeter planting of trees and ground covers. Tree planting will be tightly spaced to provide a dense canopy at eye level. Tree species will be limited to those that will not interfere with the overhead power lines and shall be trimmed as necessary to meet standards set by SDG&E.

Other relevant excerpts are included, or are referred to, throughout this EIR text, as appropriate.

### San Diego Unified Port District

San Diego Unified Port District (UPD) lands are directly north and south of the project area. According to the UPD's *Port Master Plan* (1988) land north of the project vicinity is designated as industrial marine related, which deals mainly with shipping terminals and storage, and public recreation, which includes park land, recreational boating use, and fishing. Land to the south is designated for commercial and park lands, and industrial recreation and marine sales, recreational boating which includes marine related uses, and an industrial business park.

### City of National City

The *City of National City General Plan* and the City's LCP address lands to the northeast and north of the project area. To the northeast (east of I-5) land use designations include commercial automotive (CA) which is located mainly along National City Boulevard in conjunction with the Mile of Cars; industrial light manufacturing (ML), much of which is automotive related; and areas of open space (OS) and open space reserve (OSR) which limit development and create permanent open space. Portions of the land to the northeast also carry the special "overlay zone" designation of redevelopment (RD). This identifies properties included in the City's adopted redevelopment plans, the use and development of which is regulated by the Community Development Commission. National City zoning designations north (west of I-5) of the project area include tourist commercial (TC) which allows for the provision of goods and services for automobile-oriented visitors, and industrial (M) which adds to the industrial land uses on UPD property and OSR.

### **Proposed and Approved Land Uses in the Project Vicinity**

The bayfront areas in Chula Vista and National City, and land within the UPD's jurisdiction, have either been developed over the years or are vacant, undeveloped lands. Numerous projects have either been proposed and not approved, or have been approved but not yet developed.

Within the UPD's jurisdiction the expansion of marine-related uses is planned, although at this time tentative. The UPD's Master Plan proposes to add an extension of its ship berthing facilities (a total of 3,400 feet), and possible additional improvements in cargo loading/unloading and storage facilities that could handle increased commodities of scrap metal, petroleum and lumber. Also, recreational uses are tentatively planned for UPD lands, which would include active and passive activities such as fishing, picnicking and sightseeing. Much of this development depends on the final construction design of Highway 54 and Tidelands Avenue.

To the south the UPD's plans are again tentative. Proposed development includes the construction of Marina Parkway (which would run in a north/south direction between Rohr and the Marina), a 300 room hotel adjacent to and southwest of Rohr Industries close to the Marina, Jake's Restaurant, and approximately 60,000 s.f. of commercial retail uses located on the "J" Street extension (Trull, 1989).

Within the City of Chula Vista, Rohr Industries is currently proposing an office complex which includes 245,000 square feet of office space and associated parking on an 11-acre vacant site just north of the existing Rohr complex.

Running east-west adjacent to the boundary lines of both National City and Chula Vista is the combined Highway 54/Sweetwater River Flood Control Channel Project. This project is already underway and will provide additional access between I-805 and I-5 in the Southbay and will upgrade flood control for the area. The estimated date of completion is sometime in 1993.

### Impacts

Land use impacts consider three different factors: (1) the compatibility of the proposed project with the surrounding area uses; (2) the compatibility of the project's internal uses with each other; and (3) the consistency of the project land use designations with the surrounding area designations. Other related issues such as traffic, noise, public access and visual impacts are mentioned in this section but discussed fully in their respective sections of the report.

Because the "project" is actually a change to the LCP text, the impact analysis is based both on the text changes, as well as on the potential development which would be allowed by the new LCP text. The potential development is represented by the actual developer's proposal for this area as well as by City-designed alternatives to this proposal. In addition to the future potential development, the impact analysis also reviews the City-proposed change from urban uses to open space at "D" Street fill and Gunpowder Point. This change would make the LCP consistent with the recently established Sweetwater Marsh National Wildlife Refuge.

### **Proposed Project**

#### Compatibility With Surrounding Area Land Uses

The Proposed Project is described in Section 2.0, Project Description, and is shown on Figures 2-IV and 2-V. As described, the proposal includes high density residential, a variety of commercial uses, public and quasi-public, and park and recreation areas in Subarea 1 (the Midbayfront). Also, the "D" Street Fill and Gunpowder Point would be redesignated to open space.

The proposed types of land uses themselves would be consistent with the surrounding areas, and are the types of land uses adopted by the existing certified LCP. The intensity of the land uses is, however, out of scale with the surrounding area. Intensity of land use is related to magnitude of development, or density, which can be quantified by assessing the amount of square footage over a given area. Greater density is achieved by either covering a greater percentage of a given area, or by increasing the height of a building, or by both. In the case of this project, the area coverage and the height of the buildings total approximately 4.2 million square feet of building area over the 135 acre Midbayfront area, or an average of approximately 31,000 square feet per acre. In order to achieve this building area, and to

provide parks and public areas, the heights of the buildings are much higher than those of the surrounding areas. Most buildings in the immediately surrounding area are 1 to 2 stories, whereas the project buildings range from 1 to 26 stories.

In order to define the impacts, an acceptable level of intensity must first be identified. The expectation of what the acceptable intensity of development should be is probably best defined in the City's existing certified LCP, which allows a maximum of 2.5 million square feet of building area over the site. The existing LCP went through exhaustive public and agency review before its certification, resulting in a plan that attained most public and agency acceptance.

Another way to compare project intensity with the surrounding area is to compare actual densities in the area. Actual densities were obtained from City of Chula Vista planning staff. For residential development, the densities in the .5 mile surrounding area range from an average of 15 dwelling units per acre (du/ac) to a high of approximately 35 to 40 du/ac in the older areas. The newer residential developments have maximum densities of 22 to 28 du/ac. The existing Bayfront Specific Plan allows a maximum density of 30 du/ac upon implementation of certain parcel density considerations. For the project, the average residential density is 66 du/ac of land designated for residential use. For commercial buildings, the densities in the surrounding area range from an average of 11,000 to 26,000 square feet per acre, to a maximum of approximately 44,000 square feet per acre. The proposed project has an average commercial density of 51,450 square feet per acre (this does not include the athletic facilities).

Other industrial uses in the project vicinity contain buildings of large mass and multi-storied height, such as the SDG&E Southbay plant to the south of the Rohr buildings. These areas are very dense (though site and building coverage is not known) and the proposed project, though of an entirely different nature, would not be out of scale with these types of nearby developments.

A third way to compare intensity is to look at similar types of projects. A review of projects in the San Diego area led to two projects which have been developed and have relatively similar uses. Seaport Village, located on the bayfront in downtown San Diego, will have, after its expansion, a total of 250,000 square feet of commercial uses spread over 20 acres, or an average of 12,500 square feet per acre. The Coronado Towers, a residential development on the ocean and bayfront in Coronado, has a total of 1,467 dwelling units over .30.5 acres or 48 dwelling units per acre. The proposed project has an average density of 31,000 square feet to the acre, and 66 dwelling units per residential acre.

Thus, though the types of land uses result in no land use consistency impacts with the surrounding area, the intensity of land uses would result in a significantly greater intensity of development than was envisioned for this site and how it relates to the surrounding area. This is considered a significant land use impact. Additionally, the LCPR No. 8 does not set a maximum density for the "Residential High" category, thus the significant impact could be worsened with the potential of higher densities than what is proposed in the Development Plan.

Intensity impacts also relate to visual quality, community character and public access. The combination of these impacts result in cumulative project-related impacts.

The project site is somewhat isolated from many surrounding land uses by the wetlands, the Sweetwater River channel, and I-5. Only Rohr Corporation to the south, and four restaurants and a hotel between "E" and "F" Streets on Bay Boulevard, are adjacent to the site. Therefore, the proposed land uses have a greater opportunity to contrast with the surrounding area and yet continue to be compatible. The existing LCP recognizes this opportunity by allowing heights up to five stories, and an architectural feature of a greater height (70'). The proposed project, however, is considered to significantly exceed this opportunity as the proposed density and structure heights are approximately two to four times that allowed by the existing LCP.

The other part of the project, which is the redesignation of urban uses on "D" Street Fill and Gunpowder Point to open space, is consistent with the recently established Sweetwater Marsh National Wildlife Refuge, and would result in no change occurring to these areas except a separate effort to restore them to their natural condition. There would be no impacts to the surrounding areas from leaving these areas in open space.

#### Compatibility Between Internal Land Uses

The internal land uses are composed of two different types of areas: (1) the open space associated with the National Wildlife Refuge lands; and (2) the urban uses associated with the Midbayfront project area. The land uses within the urban area are considered generally compatible, with one exception. The residential units above the commercial retail and the nearby commercial visitor uses in the central core area would be exposed to much commercial activity. The influx of visitors would largely occur in evenings and on weekends when most residents would be home. Traffic congestion, competition for parking, noise from traffic and visitors, and night-lighting could create significant incompatibility impacts.

Residential, office, visitor, and retail commercial development all could be compatible with open space or park use, but each would affect the character of such uses. The intensity of the urban land uses proposed for the Midbayfront is not considered compatible with the unique and protected open space uses of the adjacent Sweetwater Marsh National Wildlife Refuge, and the Chula Vista Nature Interpretive Center located within the Refuge. The Refuge and the Center were created to provide an area appropriate for protection of the unique sensitive wildlife resources and habitat, and to educate the public about the resources within the Refuge. The proximity of the proposed Midbayfront development, (even with the buffers) coupled with its proposed intensity, creates significant land use compatibility conflicts between these two potentially very different areas. The buffers between the Midbayfront area and the NWR vary in width from 50 to 100 feet in the "F" & "G" Street Marsh area, and from approximately 125 to 200 feet in the parks which act as buffers between the development and the rest of the NWR.

## Consistency With Land Use Plans

### Chula Vista Bayfront Local Coastal Program

The project proposes a resubmittal of the LCP, which would change the existing land use designations. Thus, of course, the physical project is not consistent with the existing adopted LCP, and is the reason for the resubmittal project. The future development proposed for the Midbayfront subarea would be allowed only with approval and certification of the LCP Resubmittal. The proposed changes to the LCP have been described in Section 2.0, Project Description, and briefly, include redesignating "D" Street Fill and Gunpowder Point to open space, and redesignating land uses and their densities within the Midbayfront (Subarea 1).

### General Plan (Update) - 2010

The General Plan land use designations were designed to coordinate with those of the existing LCP. The proposed project proposes land use types allowed by the General Plan, however, the placement and intensity of uses exceeds the limits of the General Plan and are thus inconsistent. The project proposes to change the existing LCP which would in turn require an amendment to the General Plan. If this occurred, then the proposed development would be consistent with the amended designations.

### Redevelopment Plan

The proposed land use designations are generally consistent with the land uses suggested by the Redevelopment Plan but are not consistent with the locations suggested by the Redevelopment Plan.

### Other Plans

The proposed designations are considered consistent with adjacent designations in UPD lands. National City designations are separated from the proposed Midbayfront (Subarea 1) designations by the National Wildlife Refuge over the rest of the site, and no land use consistency impacts would occur.

## **Alternative 2 - Existing Certified LCP**

### Compatibility With Surrounding Area Land Uses

As described in Section 2.0 (Figure 2-VI and Table 2-1), the major land uses associated with Alternative 2 are office, residential, industrial business park, and parks. There are also pockets of highway commercial uses. The major difference between this alternative and the proposed project is the difference in density both with site coverage and height of buildings, and the absence of resort (hotel, conference and athletic) uses. The types of land uses are consistent with the surrounding area. This includes the industrial business park placed adjacent to the existing Rohr facilities, the offices and highway commercial uses adjacent to existing visitor commercial uses, and the remaining office and residential uses adjacent to open space. It should be noted that the design of this alternative was created for an

example only to show maximum building heights and general possible locations of types of buildings as allowed by the existing LCP.

This alternative is considered to be within an acceptable level of intensity, as this was the alternative which underwent extensive public and agency review before its adoption.

#### Compatibility Between Internal Land Uses

The land uses within the site (Midbayfront - Subarea 1) are considered compatible with each other. It is important that the perimeter buildings are set back away from the Refuge and that their heights are low, so as not to create incompatibility impacts with the land uses of the Refuge, including the Interpretive Center.

#### Consistency With Land Use Plans

##### Chula Vista Bayfront Local Coastal Program

This alternative represents an implementation of the existing LCP, and is thus consistent with it. However, the existing LCP includes urban land use designations over the area which was recently established as a National Wildlife Refuge. The federal refuge status precludes any other type of local designation, thus, this alternative would have to include an open space designation in these areas to be consistent with the federal refuge. The City's Bayfront Specific Plan implements the Land Use Plan and thus acts as the zoning code for this area. This alternative is therefore consistent with the Bayfront Specific Plan.

##### General Plan Update (2010)

Because the General Plan designations reflect those of the existing LCP, and this alternative implements the existing LCP, this alternative is consistent with the General Plan.

##### Redevelopment Plan

The existing LCP designations generally conflict with the Redevelopment Plan designations.

##### Other Plans

This alternative's designations are also consistent with adjacent designations on UPD lands and with nearby designations in National City.

#### **Alternative 3 - Reduced Density 1**

#### Compatibility With Surrounding Area Land Uses

As described in Section 2.0, the major difference between this alternative and the proposed project is the density reduction and reconfiguration of the apartments in the northern part of the site, and elimination of residential units south of the lagoon. Thus, land use types are

the same as the project, but are reduced in intensity. The land use types are considered compatible with the surrounding area land uses.

This alternative proposes approximately 3.5 million s.f. of building area, significantly above the maximum allowed by the existing LCP (2.5 million). The heights of the hotels and apartments are similar to those of the proposed project (ranging from 30 to 265' high), and are also inconsistent with the surrounding area. The intensity of this alternative is significantly greater than the surrounding area land uses, and as with the proposed project, would create significant land use compatibility impacts.

#### Compatibility Between Internal Land Uses

The internal land uses of high density residential, commercial visitor, commercial retail, and park and recreation are considered generally compatible. As with the proposed project, one concern is the interface between the commercial retail uses with residential above in the central core area. These units would be located in a very busy area, with associated noise and lights at night. Significant impacts could occur to these residents due to their proximity to the commercial retail, as well as to the nearby commercial visitor (hotel) uses. Also, as with the proposed project, the intensity of the land uses situated in close proximity to the Refuge and Nature Interpretive Center creates potentially significant incompatibility impacts.

#### Consistency With Land Use Plans

This alternative does not involve a resubmittal of the LCP itself, thus this aspect is not analyzed. However, the development plan associated with this alternative is analyzed for its compatibility with existing land use plans.

#### Chula Vista Bayfront Local Coastal Program

This alternative is not consistent with the existing LCP. The types of land uses specified by the existing LCP are consistent; however, the placement of structures, and the intensity, including the height, are not. Thus, significant inconsistencies would occur. Significant inconsistencies also exist with the Bayfront Specific Plan as it implements the existing Land Use Plan.

#### General Plan (Update) - 2010

This development plan is not consistent with the General Plan as the General Plan land uses are the same as those in the LCP. Significant inconsistencies exist.

#### Redevelopment Plan

This analysis is the same as for the proposed project; that is, the proposed land use designations are generally consistent with the land uses suggested by the Redevelopment Plan, but are not consistent with the locations suggested by the Redevelopment Plan.

## **Other Plans**

No significant inconsistencies would exist with the nearby designations found in the UPD plan and the City of National City plan.

### **Alternative 4 - Reduced Density 1A**

The analysis of land use impacts for this alternative is the same as that for Alternative 3, with the exception that the bungalows associated with the luxury hotel have been removed and integrated into the hotels within the central portion of the site, resulting in taller hotel buildings. Thus, more public park land would be available, increasing the park acreage for this alternative to 29.8 acres (from 18.9 acres for the proposed project).

### **Alternative 5 - Reduced Density 2**

#### Compatibility With Surrounding Area Land Uses

The land use types associated with this alternative are the same as for the project, however, the intensity is significantly reduced by approximately 1.6 million square feet. The total square feet in this alternative is approximately 2.57 million s.f., which is close to the maximum allowed by the existing LCP (2.5 million s.f.). The heights, however, continue to exceed the existing LCP height limits by a maximum of 87' (equivalent to a six- or seven-story building).

The land use types are compatible with the surrounding area, but the heights of the high rises are out of scale. This site is physically isolated from much of the surrounding area, however, the building heights would create potentially significant compatibility impacts.

#### Compatibility Between Internal Land Uses

The analysis of this issue is the same as that for Alternative 3, with potential impacts occurring to the residential units located within the core area, and to the open space and educational uses of the adjacent Refuge and Interpretive Center.

#### Consistency With Land Use Plans

The analysis is the same as that for Alternative 3; that is, the proposed land use designations are generally consistent with the land uses suggested by the Redevelopment Plan, but are not consistent with the locations suggested by the Redevelopment Plan.

#### Alternatives 8 and 9

See the DEIR, Volume I, Sections 4.2.9 and 5.2.9.

## Mitigation

### **Proposed Project**

#### Compatibility With Surrounding Area Land Uses

The intensity of the proposed land uses will result in significant conflict with the compatibility of the site with the surrounding area. To mitigate this impact to a level below significant, a project redesign by reduction in intensity would be necessary; specifically, a reduction in building height and square footage over the site would be required. The building heights and square footage should, for the most part, not exceed that allowed by the existing certified LCP. Because the existing LCP allowed a 12-story building on Gunpowder Point, and now this area is within the boundaries of the National Wildlife Refuge, some building height and density transfer of this dimension could be allowed within the Midbayfront Subarea. Since project redesign is not proposed, however, these impacts are considered to remain significant.

#### Compatibility Between Internal Land Uses

Potentially significant impacts could occur to residents located above and nearby the commercial visitor and commercial retail establishments. These impacts could be mitigated to a level below significance by incorporating buffering design measures. These would include maximum insulation in all exterior and interior walls, floor separation design, window treatments to reflect some light, and designated parking spaces for residents within a separated and locked area of parking.

Significant incompatibility impacts would occur between the intensity of the proposed development and the unique open space uses of the Sweetwater Marsh National Wildlife Refuge and Nature Interpretive Center. These impacts could be mitigated to a level below significant only by project redesign, specifically a lowering of the building heights which are close to the Refuge boundaries, and a decrease in density along those boundaries. These buildings include the 176' apartments in the northern part of the site, the 265' Resort Hotel, the 120' Luxury Hotel and the 265' Atrium Hotel in the west-central part of the site (near the "F" & "G" Street Marsh). Building heights along the perimeter of the site (within 200 feet) should be no greater than 30' or that allowed by the existing certified LCP. Park and open space buffer areas should be located along these perimeters. Building heights and densities throughout the site should be similar to those allowed by the existing LCP, with some limited allowances for height and density transfer from Gunpowder Point. However, since project redesign is not proposed, these impacts remain significant.

#### Consistency With Land Use Plans

The proposed project is, of course, inconsistent with the existing certified LCP and the General Plan (Update) - 2010. Mitigation to create consistency would occur in one of two ways; either redesign of the project to make it consistent with the existing LCP (after which a resubmittal would potentially not be necessary), or by approval of this Resubmittal and a General Plan amendment.

### **Alternative 2 - Existing Certified LCP**

No significant impacts were stated to occur to land use issues from this alternative, thus no mitigation measures are necessary.

### **Alternative 3 - Reduced Density 1**

#### Compatibility With Surrounding Area Land Uses

Significant incompatibility impacts would occur from the intensity of development allowed under this alternative with land uses in the surrounding area. Mitigation could only be achieved by a project redesign, as described above for the proposed project.

#### Compatibility Between Internal Land Uses

Two significant impacts would occur, and are the same as those described for the proposed project. Regarding the incompatibility of the intensity of development allowed under this alternative with the open space uses of the National Wildlife Refuge, however, the residential units at the northern part of the site have been redesigned under this alternative, and are of an appropriate height (25') in one area. The remainder of the development remains significantly intense, and mitigation as described for the proposed project would also be necessary for this alternative.

#### Consistency With Land Use Plans

This alternative (development plan) is not consistent with the existing LCP and General Plan (Update) - 2010, and would require either redesign to bring it into consistency, or approval of a resubmittal of the LCP and General Plan Amendment. This alternative is generally consistent with the Redevelopment Plan.

### **Alternative 4 - Reduced Density 1A**

Significant impacts and mitigation measures for this alternative are the same as those identified for Alternative 3.

### **Alternative 5 - Reduced Density 2**

Significant impacts and mitigation measures for this alternative are the same as those identified for Alternative 3, with one exception. Significant land use intensity impacts are reduced due to the reduction in the amount of square footage; however, building heights remain excessive, continuing the significance of the impact. Thus, mitigation to a level below significant could be achieved by reducing the building heights, as recommended for the proposed project.

### **Alternatives 8 and 9**

See the DEIR, Volume I, Sections 4.2.9 and 5.2.9.

### Analysis of Significance

Significant land use impacts would occur from development of the proposed project and the three reduced density alternatives. No significant land use impacts would occur from development allowed under the existing LCP. The significant impacts are due to:

- 1) Incompatibility of the intense nature of the development with the land uses of the surrounding Chula Vista area;
- 2) Incompatibility of the intense nature of development with the adjacent unique open space uses of the Sweetwater Marsh National Wildlife Refuge and Nature Interpretive Center;
- 3) The potential incompatibility of the residences located above and nearby the commercial retail and commercial visitor uses in the central core area. Such potential impacts include noise from traffic and people, traffic congestion, night-lighting and competition for parking spaces, all of these largely occurring on weekends and evenings when most people are home; and
- 4) Inconsistency with the existing certified LCP and the General Plan (2010).

The only mitigation measure possible to reduce the impacts from land use intensity incompatibility (number 1 above) and incompatibility with the adjacent NWR (number 2 above) to below a level of significance would be to redesign the proposed project and the reduced density alternatives. Otherwise, these impacts would remain significant. Mitigation for impact number 3 above would involve building design techniques. Mitigation for number 4 above would also necessitate either project redesign, or approval of this Resubmittal, and approval of a General Plan Amendment; otherwise, this land use impact would also remain significant. Since project redesign is not proposed at this time, the significant land use impacts requiring redesign for impact reduction are considered significant and unmitigable.

### **3.10 COMMUNITY SOCIAL FACTORS**

#### **Existing Conditions**

The character of the project area is unique in that it constitutes one of the last remaining blocks of undeveloped land on San Diego Bay. Mixed single-family dwellings, apartment and commercial uses are located to the east of the project area, but the project area itself supports nothing more than a boat repair shop, defunct greenhouses and fallow fields. Up to now, the character of the area has evolved largely as a result of spontaneous growth and disuse, rather than from planned development. In recent years, however, the City of Chula Vista has been involved with specific planning in the bayfront in response to both development interest and state legislation regarding coastal lands. The project currently proposed for the Midbayfront is only one of the plans for the general South Bay area. The south San Diego area is one of the fastest growing regions in the County, and is expected to absorb a major portion of the County's growth by the year 2000.

#### **Population/Housing**

The City of Chula Vista was incorporated in 1911 with a population of 500 (Chamber of Commerce 1983). Growth has been rapid. The City's population in 1980 totaled 83,927, and in 1988 it totaled 124,160. This incredible growth of 48 percent in an eight year period is in part due to the 1986 annexation of the Montgomery area, but that is not the whole story. Population totals are rising faster in Chula Vista than in any other city of the County, excepting only San Diego, and the growth rate is greater here than in any of the other cities in the County with the exceptions of Carlsbad, San Marcos and Vista (all under 60,000 in total population) (SANDAG, 1988). Estimates for 1989 place Chula Vista total population at 128,026 - a 52.5 percent change over the nine year period from 1980.

The Midbayfront project area is located within the SANDAG Chula Vista Subregional Area (SRA) 21. Figures for SRA 21 reflect slower growth than is being experienced by the City as a whole. Population counts for the 1980 census totaled 86,828. The 1989 estimate for the SRA is 90,905, showing an increase of only 4.7 percent. Similarly, total housing units in the City of Chula Vista increased from 31,888 in 1980 to an estimated 48,691 in 1989, a change of 54.8 percent. Within SRA 21, housing units only increased from 34,607 to an anticipated 37,454, a change of only 8.2 percent. Of these 37,454 units, 16,859 are expected to be single-family homes, 17,209 multi-family homes, and 3,386 mobile homes.

The estimated population and housing expected for 2010 are 91,990 persons and 39,112 houses. Of the houses, 18,432 are expected to be single-family, 17,835 to be multi-family and 3,295 to be mobile homes.

#### **Employment**

Chula Vista was formerly a city with an economy heavily dependent on agriculture. Today the picture is quite different, partly due to the presence of Rohr Industries, which is located immediately adjacent to the project area and is one of the largest employers in the County.

In 1985, Chula Vista's total employment was 37,831, an increase of 4.5 percent since 1980. The average increase County-wide was 4.1 percent. The number of employees by industry is shown below (SANDAG 1986).

| <u>Industry</u>                          | <u>Number of Employees</u> |
|------------------------------------------|----------------------------|
| Agriculture, Forestry, Fishing, Mining   | 405                        |
| Construction                             | 1,545                      |
| Non-Durable Manufacturing                | 890                        |
| Durable Manufacturing                    | 6,525                      |
| Transportation, Utilities, Communication | 984                        |
| Wholesale Trade                          | 1,248                      |
| Retail Trade                             | 9,287                      |
| Finance, Insurance, Real Estate          | 1,587                      |
| Services                                 | 9,028                      |
| Government                               | 6,332                      |
| Military                                 | <u>0</u>                   |
| Total:                                   | 37,831                     |

### Impacts

The project proposes a mix of retail/entertainment, hotel, residential, commercial and recreational uses. A total of 1,550 one- and two-bedroom residential units are proposed for the Midbayfront project. One-bedroom units will account for 70 percent (1,087) of the residential capacity. Multiplying the total number of units by the City of Chula Vista multiplier of 1.94 results in an estimated population increase of 3,007 individuals. The project area population and homes would constitute approximately three percent each of the estimated 1989 housing growth and increased population for SRA 21; and three percent (population) and four percent (housing) of the 2010 housing population projections.

The amount of permanent housing and population growth that was anticipated for the project area is less than that proposed. The existing LCP allows approximately 543 dwelling units over the Midbayfront area. Thus, the proposed housing and resulting permanent population represents an approximate 185 percent increase over what was planned. The comparison of number of housing units for the project and each of the alternatives is shown below.

These increases are significant for the project site, but are less than significant on a subregional basis where the increase averages three percent.

| <u>Alt. No</u>   | <u>Projected</u> | <u>Proposed</u> | <u>Difference</u> | <u>Percent Increase over Projected</u> |
|------------------|------------------|-----------------|-------------------|----------------------------------------|
| Proposed Project | 543              | 1,550           | + 1,007           | 185                                    |
| 2                | 543              | 543             | 0                 | 0                                      |
| 3                | 543              | 1,300           | + 757             | 139                                    |
| 4                | 543              | 1,300           | + 757             | 139                                    |
| 5                | 543              | 750             | + 207             | 38                                     |

Regarding employment, the number of potential employers is currently unknown as the types of all commercial uses are not yet known. It is anticipated that substantial employment opportunities will be available, resulting in beneficial impacts to both the City and regional economy.

### Mitigation

No mitigation measures are necessary.

### Analysis of Significance

A significant increase in housing and resulting population would occur on the project site for the proposed project and Alternatives 2, 3, 4, 5, 7, 8 and 9 over what currently exists on was planned for the site, and a substantial increase in employment opportunities would occur. Both of these are considered beneficial impacts to the City-wide and regional supply of housing and employment opportunities. Impacts relating to other issues such as traffic, utilities and services from population levels greater than those anticipated are discussed in those sections of this report.

### **3.11 COMMUNITY TAX STRUCTURE**

#### **Existing Conditions**

The project site presently generates money to the City of Chula Vista from property taxes. The project area consists of County Assessor Parcel numbers 565-010-16, 565-010-26, 567-011-203, 567-010-24 and 567-010-25. One percent of assessed market value currently collected by the County is distributed among all taxing agencies, including the County, the City of Chula Vista and the school districts.

#### **Impacts**

The proposed project would develop over 100 acres with land uses which would increase the property value in these areas, but the National Wildlife Refuge lands (316 acres) would be committed to permanent open space. Because the project site is in a designated Redevelopment area, all increases in property value from project development will be taxed one percent, and will go to the City's Redevelopment Agency. Thus, the County and the School Districts would not receive monies from the improvement of this site, however, this situation is not unique to this site, as Redevelopment Law allows monies to be distributed in this way. Even so, the project development and the subsequent change in receipt of taxes would incrementally contribute to a substantial reduction of money received by the County because of Redevelopment projects throughout the entire County.

#### **Mitigation Measures**

No mitigation measures are necessary.

#### **Analysis of Significance**

No significant adverse impacts would occur. A positive impact to the City Redevelopment Agency would occur, ~~and, as a result, an incremental adverse impact to the County would also occur from the proposed project and Alternatives 2, 3, 4, 5, 7, 8 and 9. No mitigation is necessary, or feasible, for the incremental adverse impact to the County.~~

## 3.12 PARKS, RECREATION AND OPEN SPACE

### Existing Conditions

Much of the project area presently consists of open space by virtue of the fact that no development proposal has yet been approved for this area. The existing land uses and land use designations for the site are shown in Section 2.0 on Figure 2-VI, and Section 3.9 on Figures 3-VII and 3-VIII, respectively. Figure 3-VII, Existing Land Use, shows that currently two City parks, and a National Wildlife Refuge are located within the project area. The two City parks are the Chula Vista Nature Interpretive Center, consisting of approximately 3.0 acres, and an unnamed passive park on the corner of "F" Street and Bay Boulevard, consisting of 1.0 acre. The National Wildlife Refuge consists of 316 acres covering the "F" & "G" Street Marsh, Gunpowder Point, "D" Street Fill, and the intervening marshlands. Figure 3-VIII, which shows the designations of the existing certified LCP, shows approximately 31 acres of open space within the Midbayfront (Subarea 1).

The City's General Plan (Update) discusses goals and policies for parks in Chula Vista, including the Greenbelt, which is a continuous 28-mile system of parks and open space around the City. The General Plan (Update) calls for two parks in the project area: (1) a Special Purpose park where the existing Chula Vista Nature Interpretive Center is located at the east end of Gunpowder Point; and (2) a Planned Neighborhood Park at the southern end of the project area. According to the General Plan (Update), Planned Neighborhood Parks "ideally should range in size from 5 to 15 acres...and should serve a minimum of 1,000 people each." Regarding the Greenbelt, the General Plan (Update) for the project area incorporates the "open space, wetlands, natural preserves and interpretive center and developed parks" of the project area.

The City's Threshold Standards call for provision of "public park and recreational opportunities in a timely manner...." The actual standard required for development is a ratio of 3 acres of park land to be provided for every 1,000 residents of the development.

City standards for parks are also given in the City's Parks and Recreation Element of the General Plan. In summary:

- **Neighborhood Parks** - Size - 5 to 10 acres; population served - 2,500 to 5,000 persons (2 acres for every 1,000 people served); service radius - .5 mile
- **Community Parks** - Size - minimum 15 acres; population served - 7,500 or more (2 acres for every 1,000 people served); service radius - 1.5 miles

Parking standards from the Specific Plan include:

- **Community Park Parking** - Public parking areas shall be provided at each of the major community or neighborhood parks adjacent to a major roadway, as shown in the land use map [in the Specific Plan]. Parking areas will be incorporated into open space areas close to roadways and, where possible,

shall be screened from view. One parking space shall be provided for each 10,000 square feet of accessible open space

Recent discussions between the City and the Port District regarding parking indicate that this standard is deficient, that a realistic standard along the bayfront is one space for each 1,000 square feet of accessible open space.

National Recreation and Park Association (NRPA) standards for parks are the following:

- **Neighborhood Parks** - Size - 5 to 20 acres; population served - 2,000 to 20,000 persons (2 to 2.25 acres per 1,000 people); located within .25 to .5 mile of service population
- **Community or District Parks** - Size - 20 to 100 acres; population served - 10,000 to 50,000 people (2.5 acres per 1,000 people); located within .5 to 3.0 miles of service population
- **Large Urban Parks** - Size - 100+ acres; population served - 150,000 people (5.0 acres per 1,000 people); located within .5 hour driving time
- **Regional Parks** - Size - 40-acre minimum, preferably greater than 250 acres; population served - entire population in smaller communities (20 acres per 1,000 people); located within one hour driving time

### Impacts

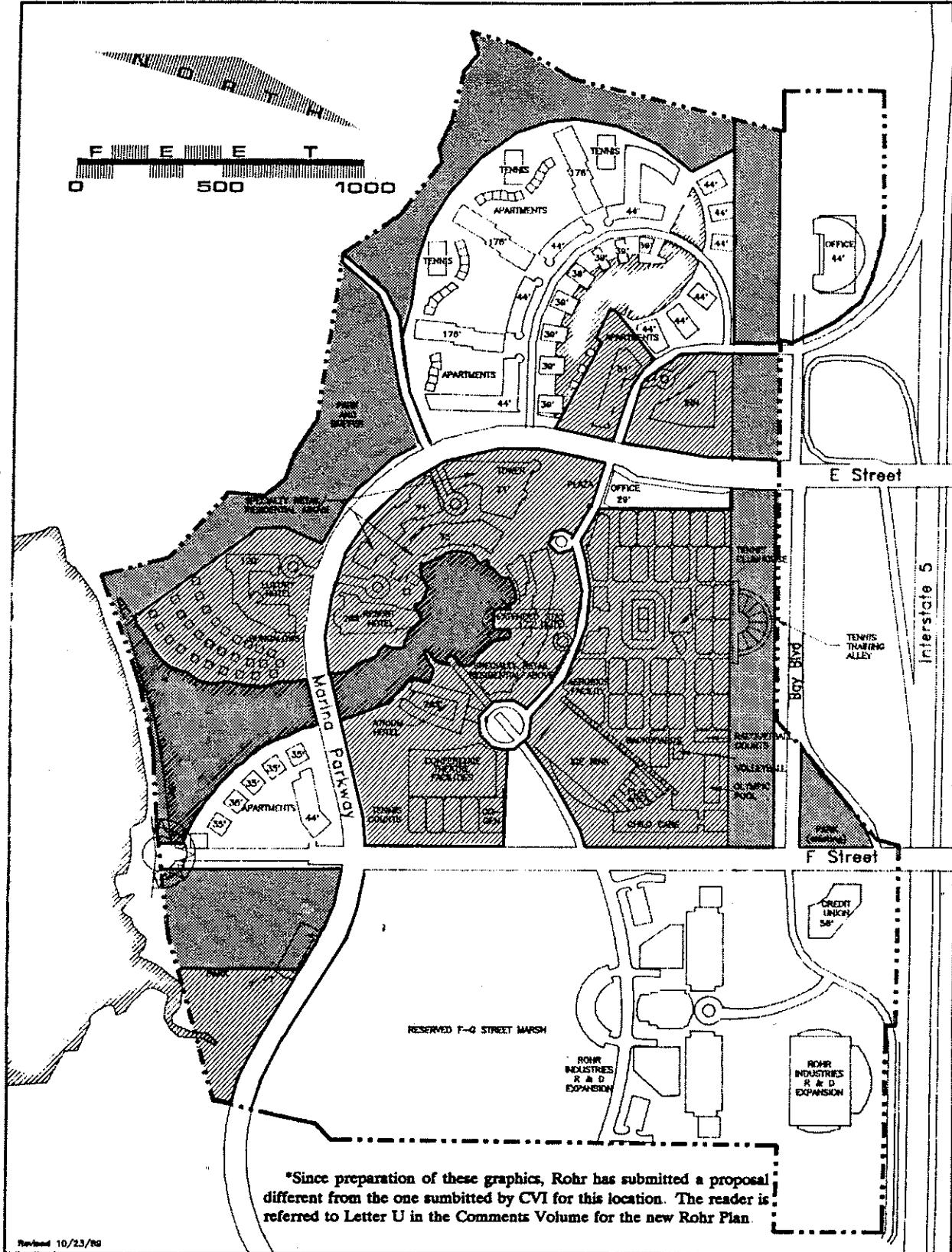
#### **Proposed Project**

The proposed project includes 18.9 acres of parkland, and a 10-acre public lagoon. The lagoon is not a park in the normal use of the word; however, some portion of the lagoon could be considered public because there would be opportunities for people to rent small paddle boats, and to access the outer edges (no bodily contact with the water would be permitted). The LCPR No. 8 does not specify how the lagoon would be accessed; unless access is provided, the credit cannot be given. The LCPR No. 8 also shows 7.6 acres of parkland within the SDG&E right-of-way (ROW), and 22.9 acres of commercial retail uses such as shops, restaurants, hotels, and the associated walkways. The athletic area, covering 16.3 acres, will also be approximately 50 percent available for public use. Figure 3-IX shows the proposed public parks and other public use areas, and Table 3-9 shows the acreage of the parks and other public areas for the project and each of the alternatives. Table 3-9 reflects the City's acceptance of areas suitable to be defined as parks, which include the perimeter land-based parks which are not located under the SDG&E power lines (138 kV). The City would consider the 7.6 acres under the power lines suitable for landscaped parking.

In order to provide consistency with the recently established Sweetwater Marsh National Wildlife Refuge, the project also includes a redesignation of land uses allowed in the existing certified LCP from residential and commercial to open space. The open space area

**L C P R E S U B M I T T A L # 8**

Revised 10/23/18



\*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.



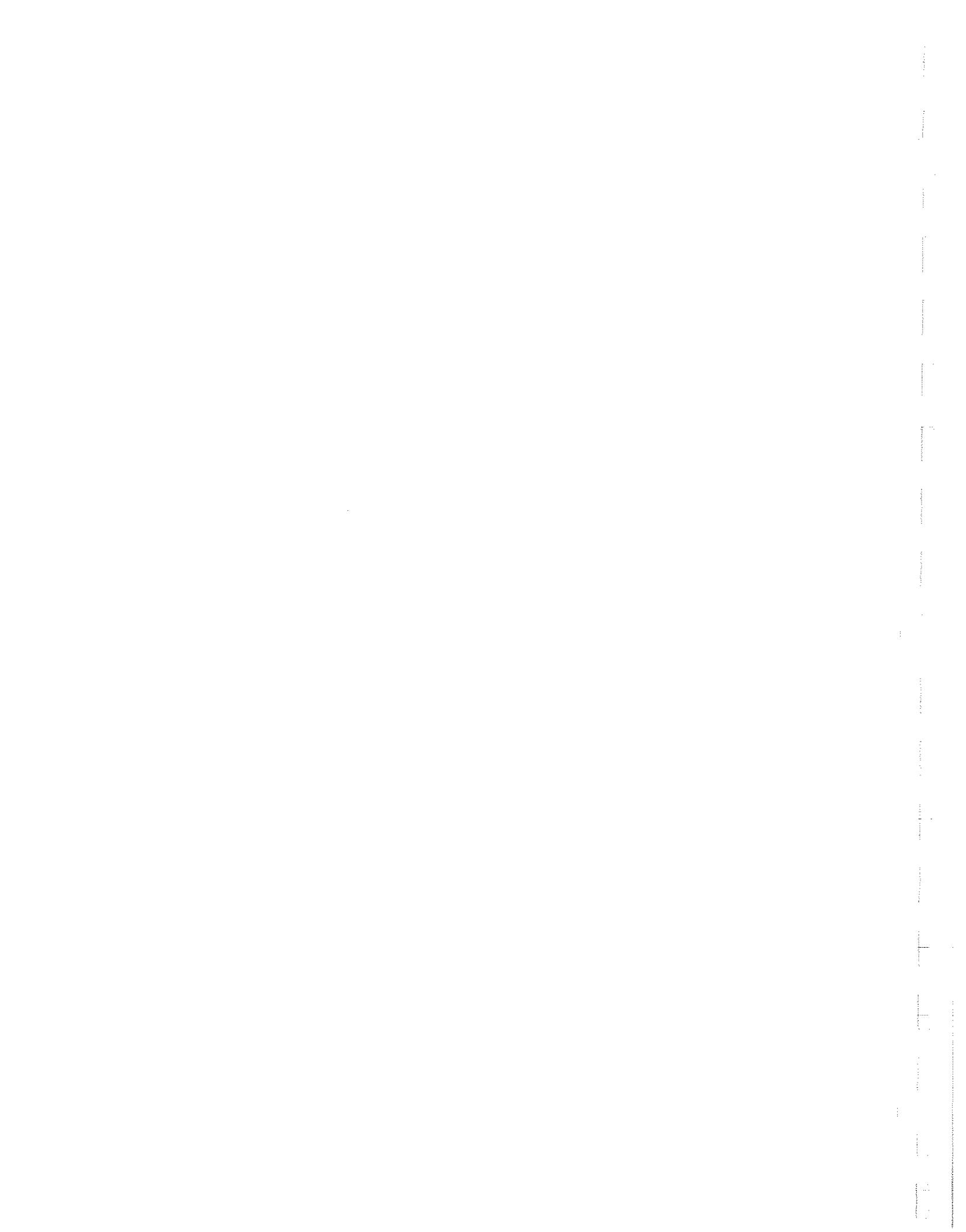
## Parks



## **Other Public/Semi-Public Areas**

# PARKS AND PUBLIC AREAS

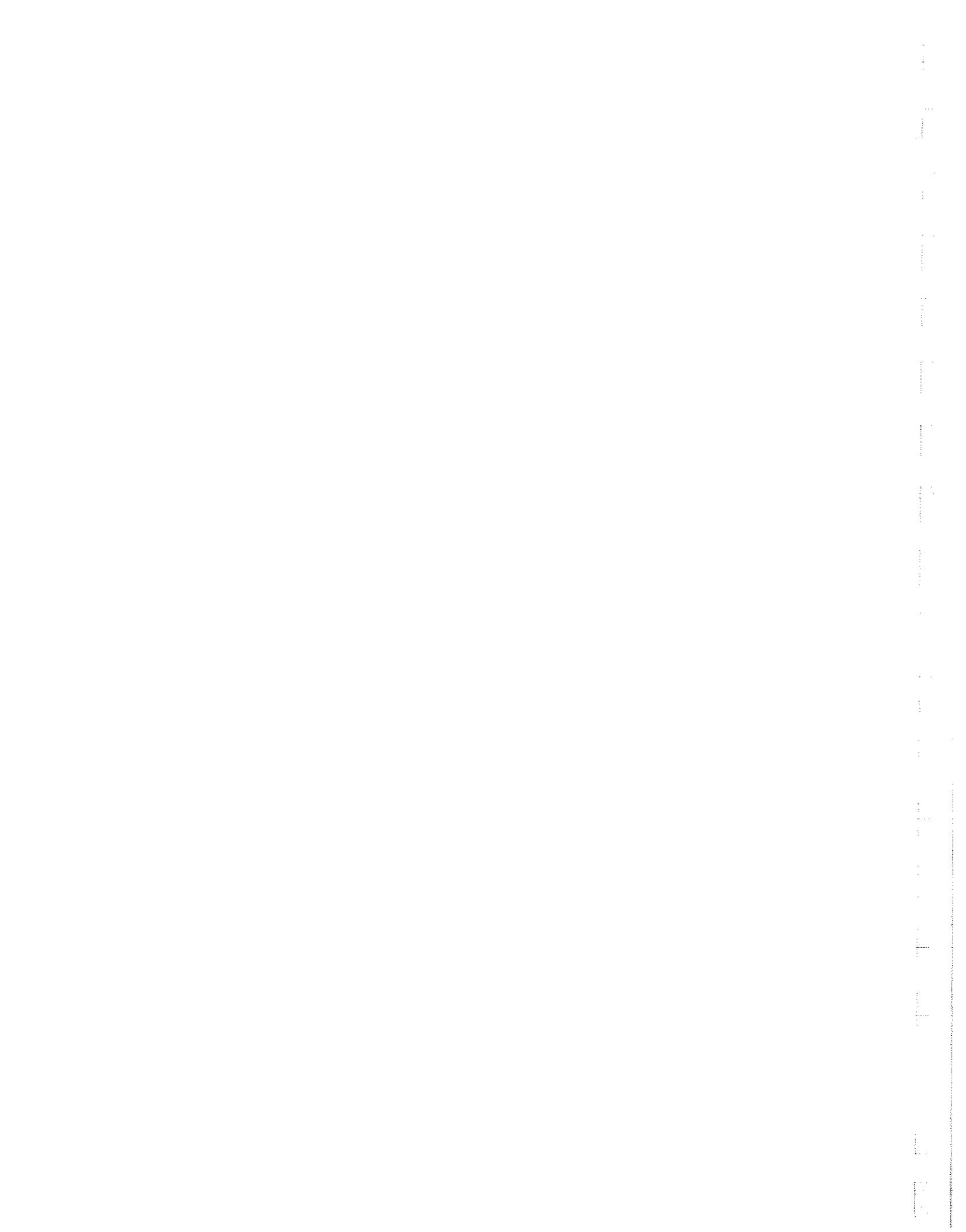
Figure 3-IX



**Table 3-9**  
**Comparison of Parks**  
**and Other Public/Semi-Public Acreage**

|                                                               | Proposed<br>Project | Alt 2      | Alt 3                 | Alt 4                 | Alt 5                 | Alt 7       |
|---------------------------------------------------------------|---------------------|------------|-----------------------|-----------------------|-----------------------|-------------|
| Parks                                                         | 18.9                | 39.6       | 24.7                  | 29.8                  | 34.8                  | 32.6        |
| <b>Other Public/Semi-Public Acreage</b>                       |                     |            |                       |                       |                       |             |
| Lagoon                                                        | <u>10.0</u>         | <u>0.0</u> | <u>10.0</u>           | <u>10.0</u>           | <u>10.0</u>           | <u>15.4</u> |
| Landscaped Parking<br>under SDG&E<br>Transmission<br>Corridor |                     |            |                       |                       |                       |             |
|                                                               | 7.6                 | 7.6        | 5.1<br><u>7.6</u>     | 5.1<br><u>7.6</u>     | 5.1<br><u>7.6</u>     | 7.6         |
| Athletic<br>Facilities*                                       | 8.15                | NA         | 8.15                  | 8.15                  | 8.15                  | 8.15        |
| Commercial<br>Visitor/Retail<br>Areas                         | <u>22.9</u>         | <u>.5</u>  | <u>25.7</u>           | <u>20.6</u>           | <u>20.6</u>           | <u>20.6</u> |
| Total Public/<br>Semi-Public                                  | 67.55               | 47.7       | 73.65<br><u>76.15</u> | 73.65<br><u>76.15</u> | 78.65<br><u>81.15</u> | 84.35       |

\* Assume 50 percent public use - total acreage is 16.3 acres



would include 316 acres under the jurisdiction of the U.S. Fish and Wildlife Service, as shown on Figure 2-III in the Project Description.

The proposed Midbayfront project area parks would function as Community Parks by City of Chula Vista standards (Mollinedo, 1989), and, because of the unique bayfront location, are expected to service an annual City and regional population of 150,000 people. This service population estimate is based on the number of project area residents (3,000+) and the unique bayfront, wetland-front characteristics of the parks which will draw a large number of City residents as well as residents in nearby jurisdictions. Based on City Threshold Standards, the amount of parkland in the project area is more than adequate to service project area residents (City's Threshold Standard requirement: 3 acres per 1,000 project residents; anticipate 3,000+ residents) and no impacts would occur to this City requirement (Mollinedo, 1989).

Since the City's anticipated 2010 population is 199,900 people (General Plan Update EIR, 1989), however, the 150,000 people is a somewhat conservative estimate for the City and regional population served. Additionally, the Nature Interpretive Center is located near the parks, and persons visiting the Center could combine a bayfront park visit with a Center visit. The Nature Interpretive Center visits in 1987-88 totaled 47,525 people, and in 1988-89 totaled 62,209 people. The 1989-90 total is expected to be approximately 94,000 visitors. The parks would tend to receive more use by local and regional residents on the weekends than on weekdays.

Passive recreational facilities would attract regional users, similar to facilities at Seaport Village, or at Mission Bay in the nearby City of San Diego. Active recreation facilities may also attract neighboring or regional users, however, it is anticipated that local residents would be more likely to use these areas.

Park concepts for the project have not been developed to a level of detail sufficient to allow analysis of the adequacy of the park functions. The NRPA has developed space standards as guidelines for community or district parks. Typically, 50 percent of space is for active recreation, more than half of which is sports fields. Roughly 40 percent is for passive recreation, parking, and landscaping, and 10 percent is undesignated space. However, this project area is unique in that it is located along the bayfront and adjacent to a very sensitive biological area protected by the National Wildlife Refuge. These standards would not completely apply to such an area where more appropriate use of park space would include a larger number of passive areas.

Based on the 2010 City and regional population which the parks are anticipated to service (150,000 people annually), the amount of proposed parkland per 1,000 people varies from approximately .13 to .26 acres among the proposed project (.13) and the alternatives (.16 to .26). This acreage is significantly below the standards set by the City and the State, which require 2.0 and 2.5 acres per 1,000 people, respectively. In order to achieve consistency with the standards, approximately 300+ acres of parkland would be necessary, which is more than double the size of the Midbayfront subarea. This is, of course, infeasible. This impact, though adverse, is not considered significant at the project level for the following reasons. First, the adopted LCP and General Plan both include park and open space requirements

with which the project is consistent; neither of these plans require over 300 acres for parks. Secondly, the project is consistent with the Threshold Standards policy. Thirdly, the City and regional visitor attraction to these parks is not wholly a result of the proposed project, it is also a result of the location on the bayfront and wetlands, and proximity to the Nature Interpretive Center. By developing the parks, the project does make the area more accessible (assuming that public parking and access is provided for), and does provide for public facilities which make it a more convenient place to visit. The project thus contributes to what is considered a cumulatively significant impact, the contributions being project development encouraging visitor use, bayfront/wetland-front location, and proximity to the Nature Interpretive Center.

Because of the anticipated high usage, it is extremely important that the parklands be designed to accommodate the types and numbers of users expected, and that adequate public facilities are available. It is important that the parklands be developed during the first phase of project development (the Phasing Plan, Section 2.4, ~~does not~~ indicates that the Overlook Park would be built during Phase I, the Buffer Park (which includes the parkland adjacent to Vener Pond and Sweetwater Marsh) during Phase III, and the "F" Street Park During Phase V ~~when the parks will be built~~). Also, it is important that other semi-public uses, such as the athletic facilities, are either free or available for a reasonably nominal charge so as to make them accessible to the public. The specific types of uses in the parks for each alternative have not been developed at all; thus analysis for each alternative beyond acreage comparisons is not possible.

### Public Access

The project site, due to its location, is strongly associated with the San Diego bayfront and the wetlands within it. Though the site has not been improved to provide for easy public access, the public can access the bayfront from "F" Street, and from utilizing the Nature Interpretive Center. Also, as no other development presently exists on the site, public views (as described in Section 3.3) provide public visual access and the perception of its public availability. Development projects, even those which include public areas and access, can discourage public use if these areas are perceived by non-project users to be private. Thus, it is important that project design in such unique areas strongly invite public usage by visual opportunities, easy public access, and adequate amounts of public use areas. Regarding public access, the proposed LCPR No. 8 text states that public access to the waterfront and natural areas should be maximized, that pedestrian and bicycle access should be provided throughout the waterfront and linear parks system, and that key points of public access to the bay and natural areas should be visible from a distance.

Though the bayfront is presently accessible to the public via "F" Street, or along the bayfront itself from the south, development of the project or any of the alternatives would attract more users and would create greater access opportunities. Although the parks would not be within walking distance for most residents from outside the project area, routing public transit to the parks, and clearly marking freeways off-ramps could make the parks accessible to most residents. Also, pedestrian/bike access across I-5 on the "E" Street bridge would make the area accessible by public use of the trolley or area bike paths. The LCPR No. 8 shows pedestrian access across I-5 over "F" and "E" Streets, and bicycle access over "F"

Street, however, the Development Plan does not include provisions for those access ways to the project area. Until these provisions are included in the Development Plan, a potentially significant deficiency to public access remains.

The proposed project public areas are shown on Figures 2-V and 3-IX. As shown, the perimeter parks, the SDG&E right-of-way, and the central lagoon, are all public. The parks on the north and west sides of the project area front on the wetlands and the bay, respectively.

Commercial areas which are public include the hotels, restaurants, and retail commercial uses which surround the central lagoon, and the inn and restaurant area located at the "E" Street end of Marina Parkway. It must be noted that residential units are located above the retail commercial uses in these areas and are, of course, private.

The semi-public uses include the conference theater facilities and associated tennis courts, the co-generation facility, and the athletic facilities including tennis courts, ice rink, child care, Olympic pool and other courts. Semi-public means that approximately 80 percent of the gymnasium, 75 percent of the ice rink, and 50 percent of all other facilities will be open to the public, though it is unknown at this time which facilities these will be.

The ability of the public to access the parks and retail commercial areas depends on the availability of public parking and access from the parking to the desired destination. There is a total of 11,413 11,262 spaces proposed which will be built in the five phases (phases described in Section 2.0). Out of this total, there are presumably there will be 390 spaces for public park and 54 spaces for the Nature Interpretive Center parking, or a total of 444 public spaces. The Phasing Plan shows that the "F" Street Park 329 of these spaces will not be built until Phase V, or until the years 2009 to 2011. There are 290 spaces associated with this park that are not shown on the phasing plan, but it is presumed that these spaces are included with park development. As stated earlier, the Phasing Plan does not include parks development. The delay in building the greater majority of public parks parking until the years 2009-2011, and the absence of identification of when the parks would be built constitutes a potentially significant impacts to accessibility to public areas parks.

Parking spaces not being used for other designated uses, such as conference center, retail commercial, and athletic facilities would be available for public parking. At this time, spaces have not been assigned for particular uses, so it cannot be determined where the public and other spaces would be located. The LCPR No. 8 text (Figure 3.10) shows the distribution of parking spaces over the project site. The spaces are located at the parks and along the SDG&E ROW. It is not clear whether the parking lots are located above-ground or under-ground at the parks location; this needs to be clarified because above-ground parks could reduce the amount of parkland. Also, the Plan is inconsistent where it calls for both parking lots and parks under the SDG&E ROW. (No parkland credit is given for this ROW.)

Based on the City's standard for Community Parks of one parking space for every 10,000 square feet of accessible open space, 82 parking spaces would be necessary.

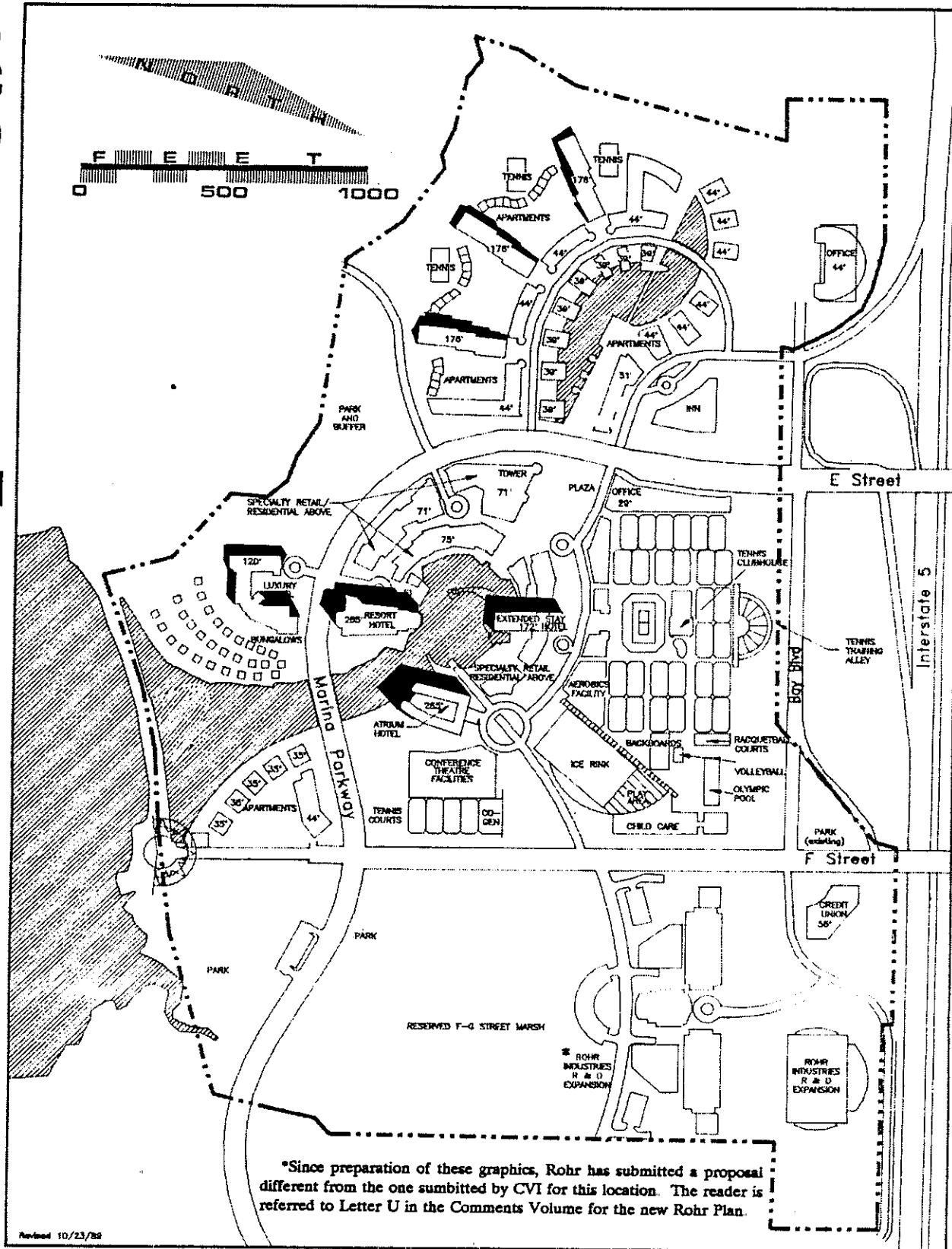
Based on discussions between City staff and Port District staff regarding parking needs for Bayfront Parks, 1.0 parking space per 1,000 square feet of parkland is a standard that is reflective of the parking for Port District bBayfront parks. Assuming the 18.9 acres of park (Table 3-9), a total of 823 parking spaces must be provided in the bayfront area. Other public and semi-public areas would require spaces as well, although the exact requirement has not been determined at this time. Given the 390 spaces proposed as part of the Plan for the park and 54 spaces for the Interpretive Center, a surplus of 308 public parking spaces would result; or, based on the Port District standards a deficit of 379 433 spaces would exist. The City of Chula Vista must decide the required amount of parking for this project. At this time, the amount of parking provided in the public parks remains a potentially significant issue requiring resolution at the project level. This deficit would increase when the number of parking spaces required for other public uses is established. The deficiency of parking spaces for park and other public uses is regarded as a significant impact. The LCPR No. 8 states that "parking should be calculated on the Chula Vista standards (Chapter 19.62, City of Chula Vista Municipal Code) for each separate use. Because of the nature of the development, there may be a way to reduce the required parking with a shared-parking plan." The LCPR No. 8 thus calls for compliance with the code, while stating that a reduced amount may be possible. The discrepancy between the City standards and the proposed number (379 spaces) is large, thus, the citation of a significant impact remains. The Parks and Recreation Department has expressed a concern that the proposed parking spaces may not be adequate to serve the proposed parks. They are also concerned that visitors to the lagoon, luxury hotel, and various apartments might use the public park spaces thereby exacerbating the parking situation. (Valenzuela, personal communication, 1991)

There is presently limited parking available for the Nature Interpretive Center along Bay Boulevard at "E" Street, however, this "lot" will be eliminated by the construction of new freeway ramps. The long-term requirements for the Center, based on existing and projected attendance, would be 150 permanent spaces. The LCPR No. 8 text provides that public parking for use by the Center would be located within the Midbayfront (Section II.E.3.h.). Also, the text states (Section II.F.4.b.(3)): "A small public parking lot and public bus shelter will be provided in the Midbayfront at the entrance to the Wildlife Refuge. Additional parking will be provided at 'E' Street and Bay Boulevard." The Parking Distribution Concept (Figure 3-10) shows 50 public parking spaces near the entrance to the NWR (but no bus shelter) and 54 spaces at "E" Street and Bay Boulevard.

#### Shade/Shadow Impacts

A shade/shadow analysis was performed to ascertain impacts to park and public open space areas. Shade/shadow conditions for select times during the summer and winter are shown on Figures 3-X through 3-XIV. Generally, shadows are the longest in the winter months in the mornings and evenings when the sun is low in the sky. Park areas are partially covered in the morning hours, however, park usage at these times would also be low. In the evenings, shadows would cover the most northwesterly portion of the northern park area, as well as parts of the residential, commercial retail and visitor areas (core area), including the tennis courts. Figure 3-XII shows the shaded areas at 5 p.m. in the summer months when use of the core area is expected to be highest. As shown, the 5 p.m. shadows, which

**L C P R E S U B M I T T A L # 8**



"Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

Revised 10/23/20

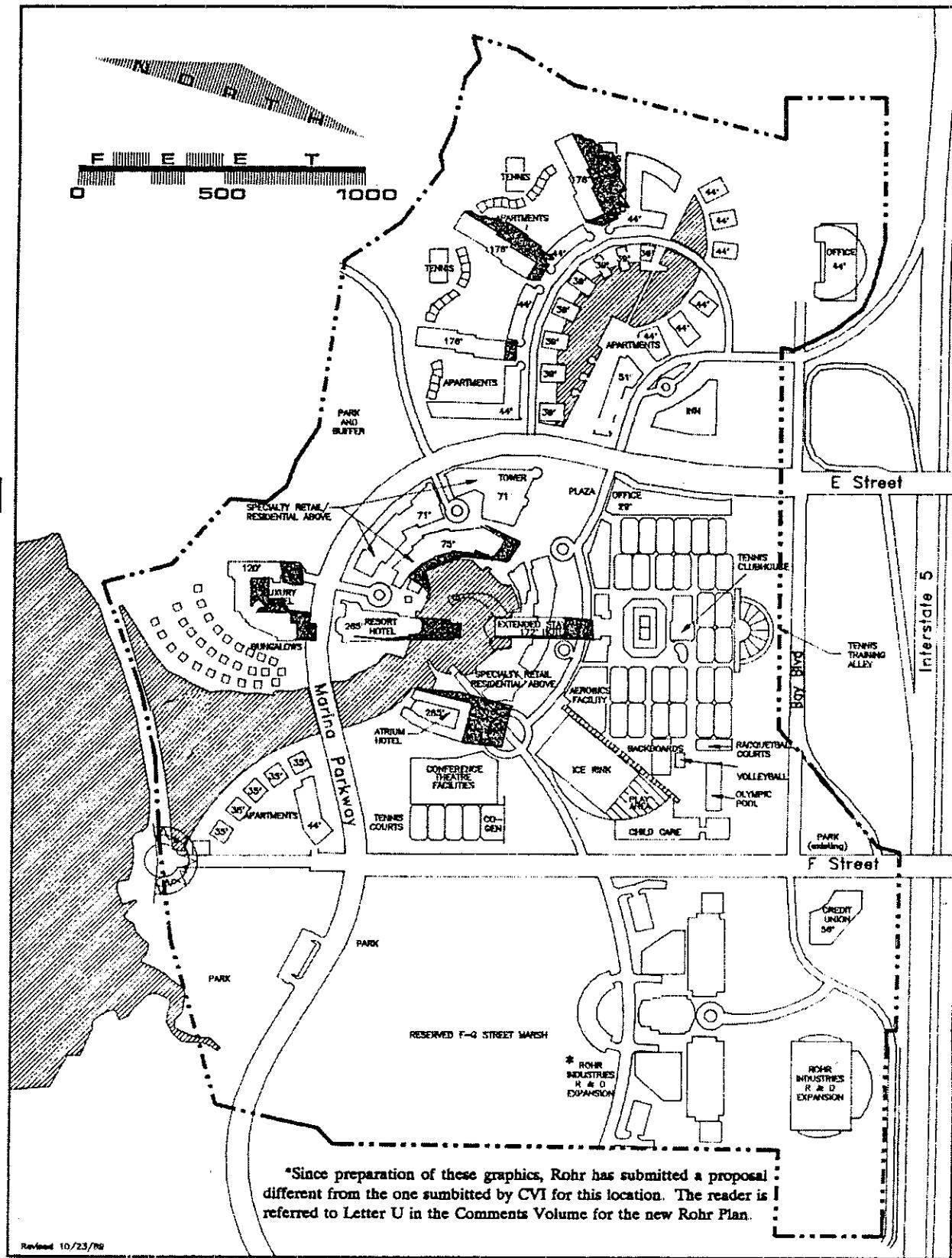
**Summer-11am**

# SHADES/SHADOW CONDITIONS

Figure 3-X



**APPENDIX C  
RESUBMITTAL #8**



Revised 10/23/78

**Summer-2pm**

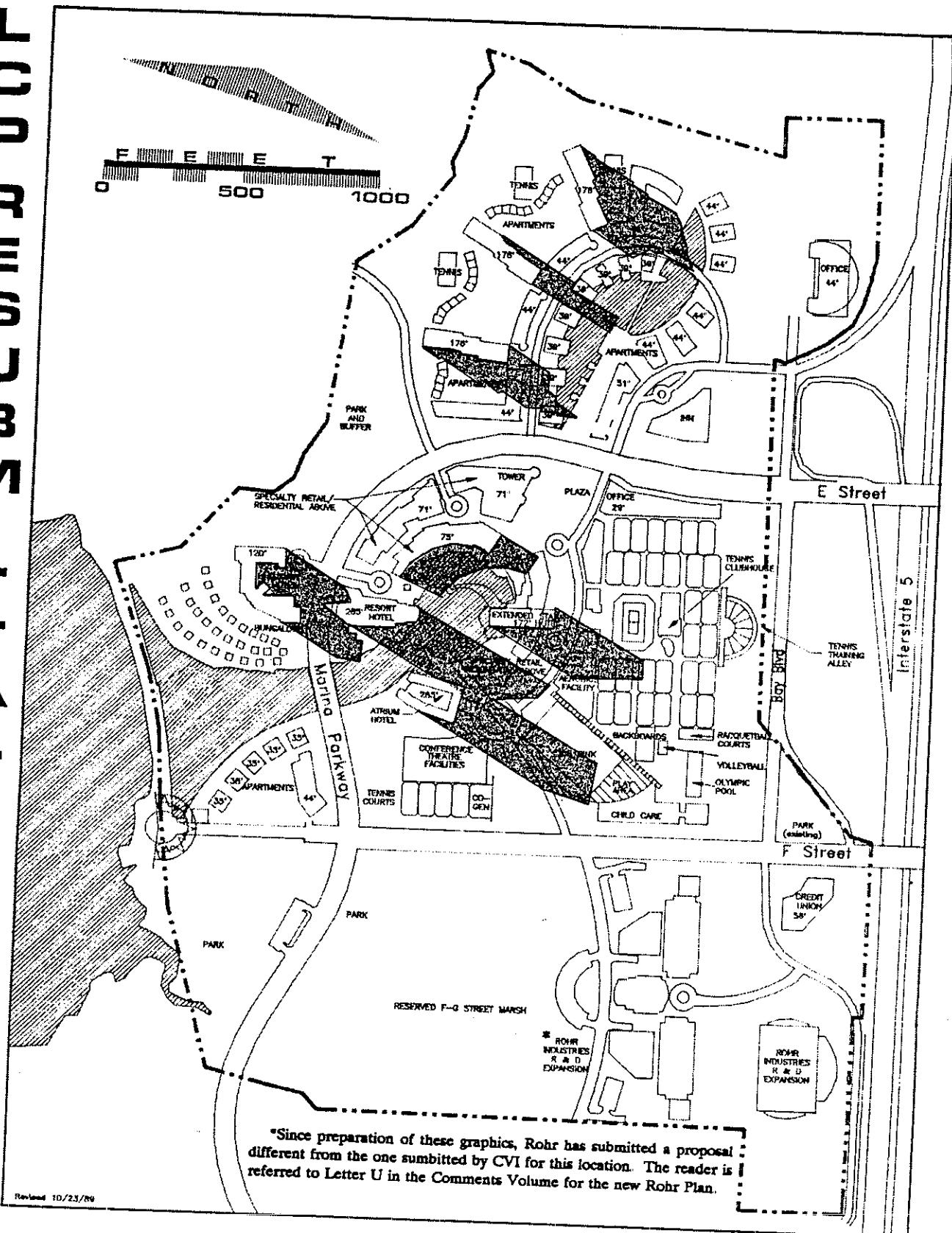
SHADES/SHADOW CONDITIONS

Figure 3-XI



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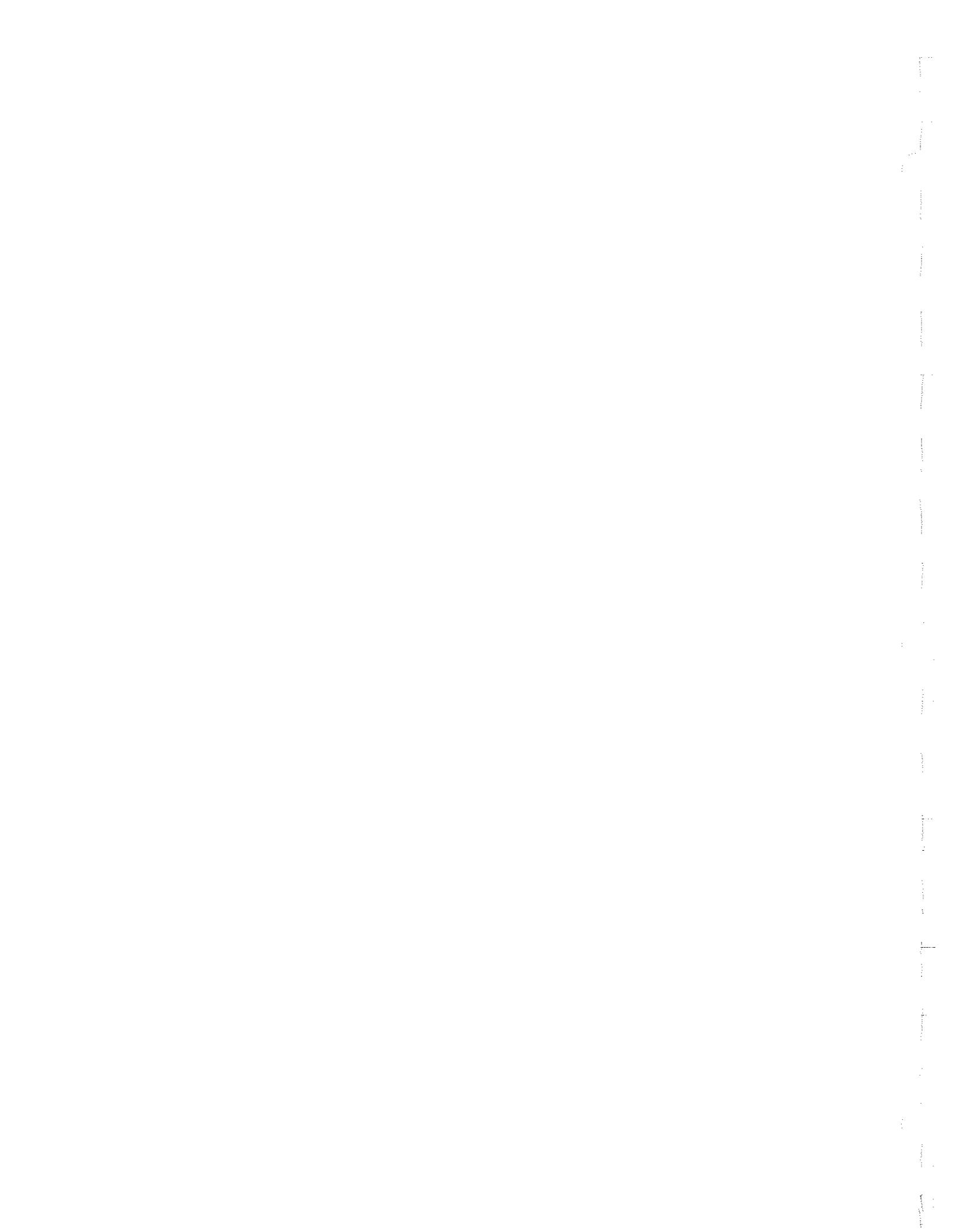
Revised 10/23/20



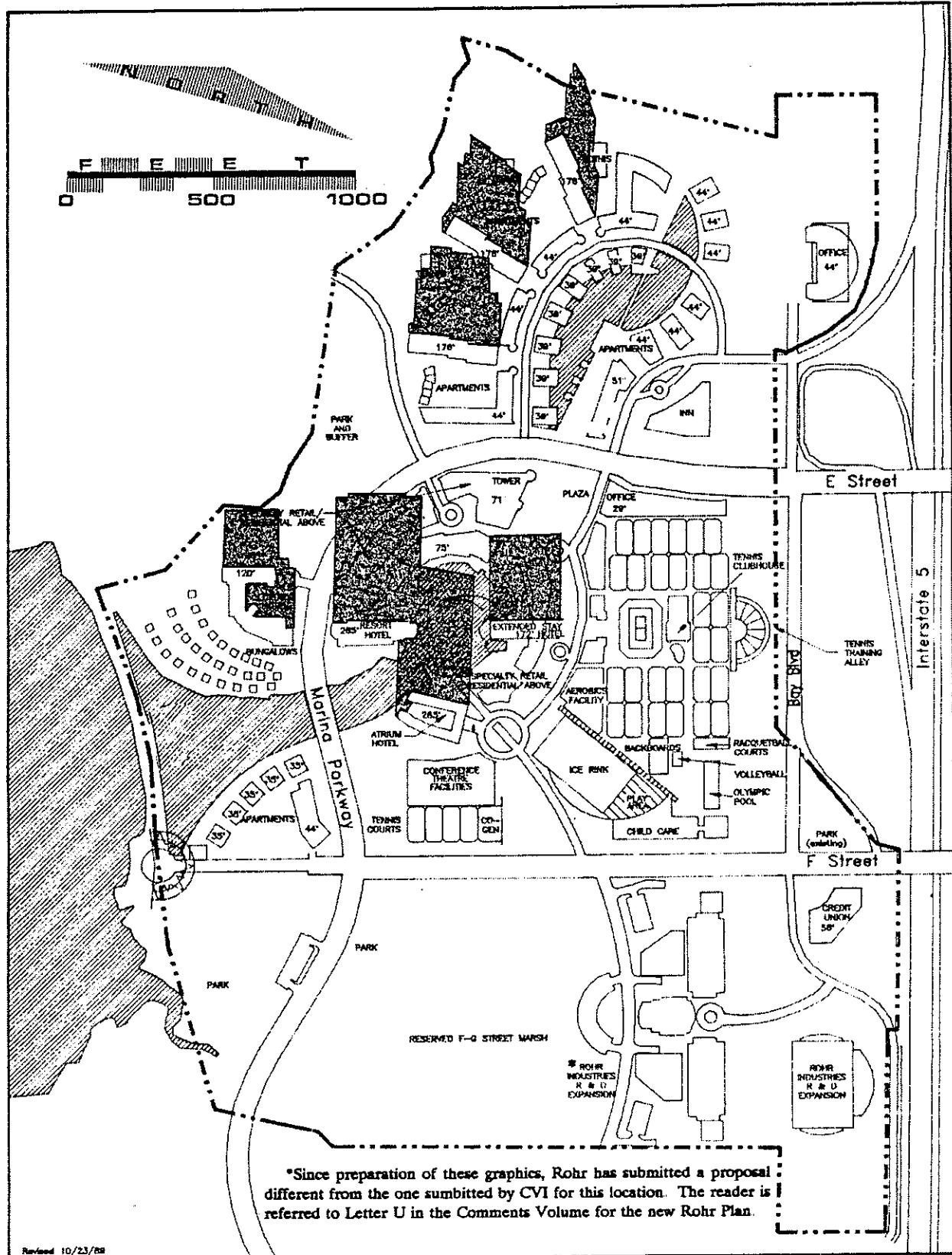
\*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

Summer-5pm

Figure 3-XII



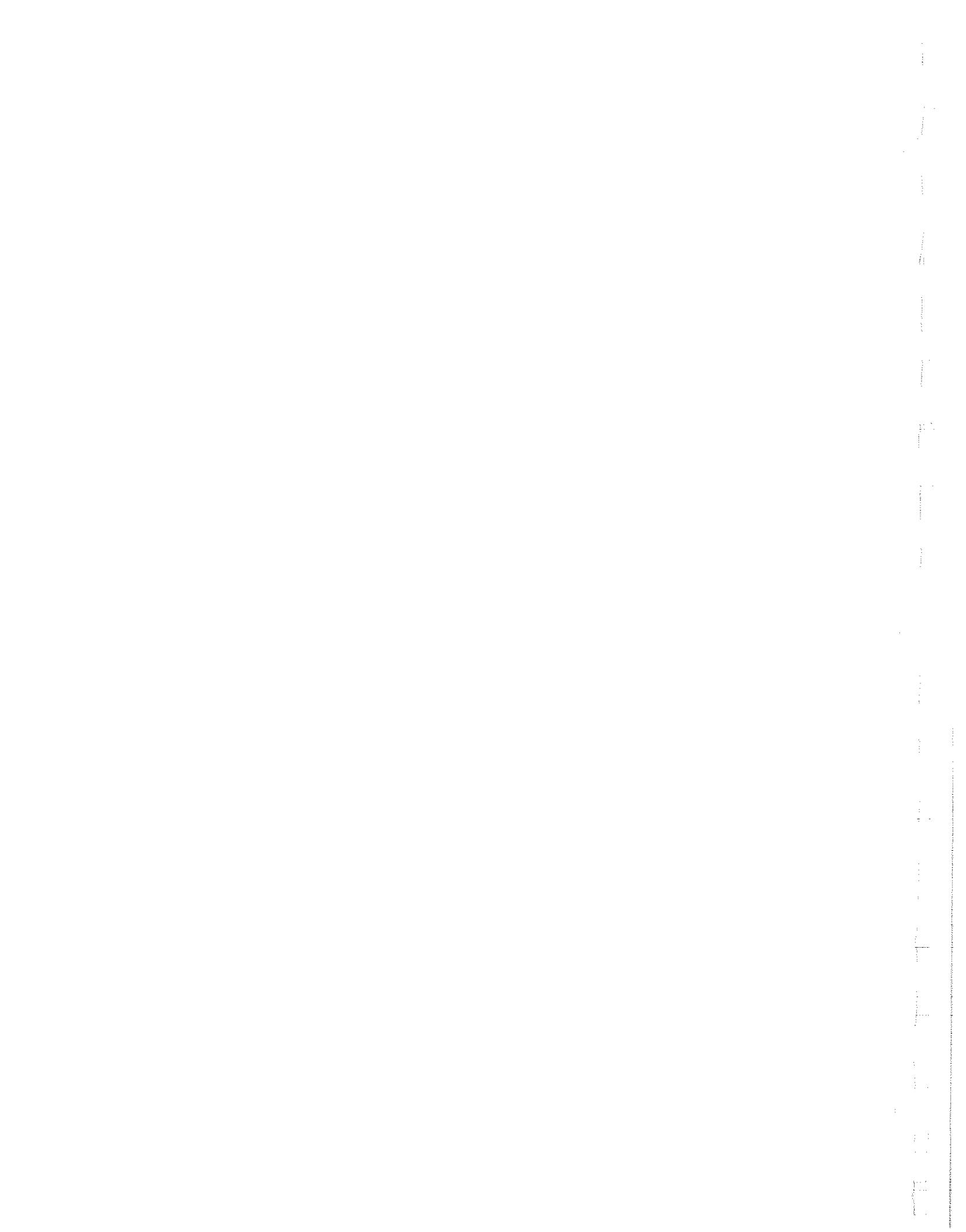
# JUPITER SUBMITTAL #8



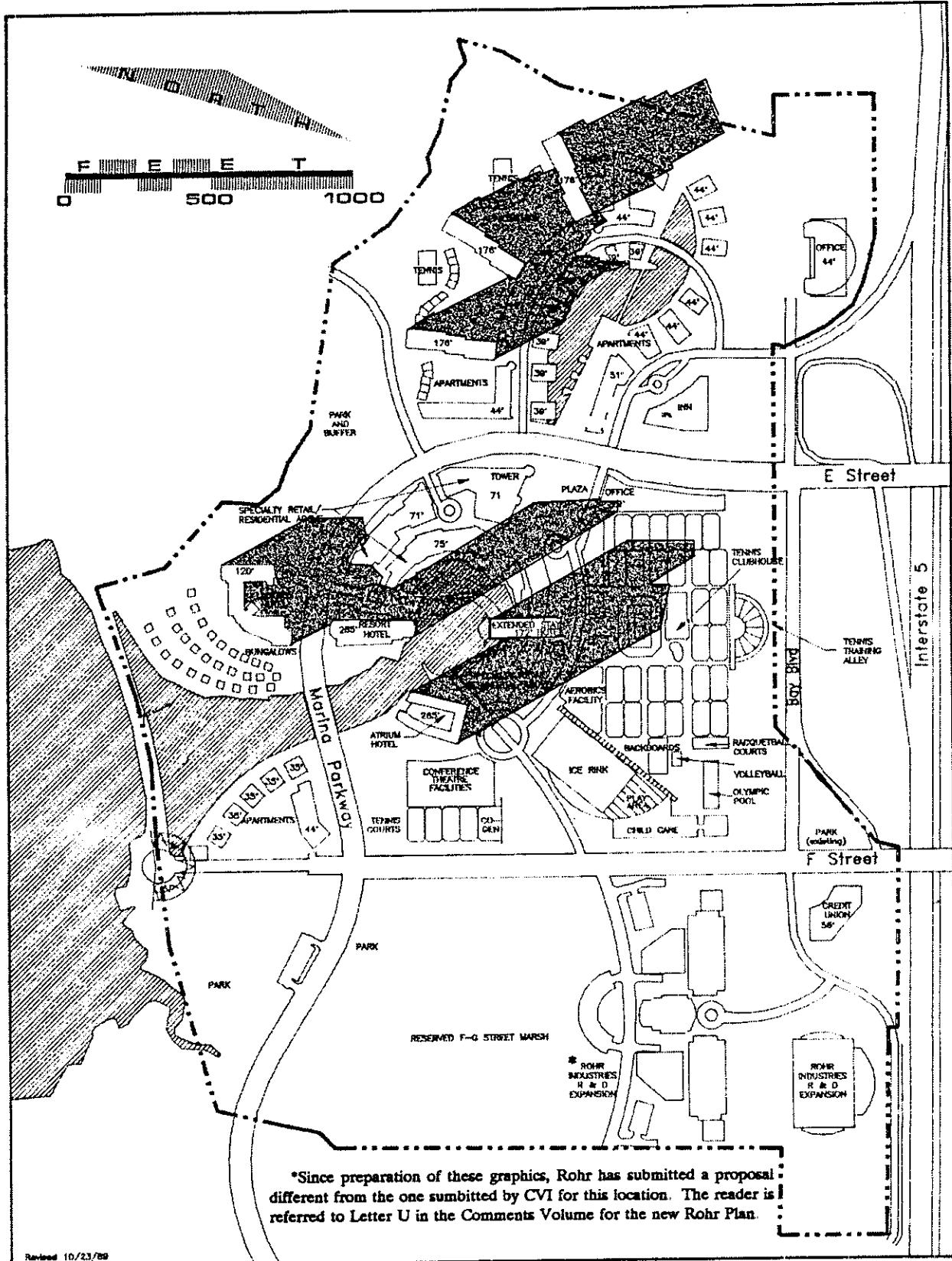
**Winter-11am**

**SHADES/SHADOW CONDITIONS**

Figure 3-XIII



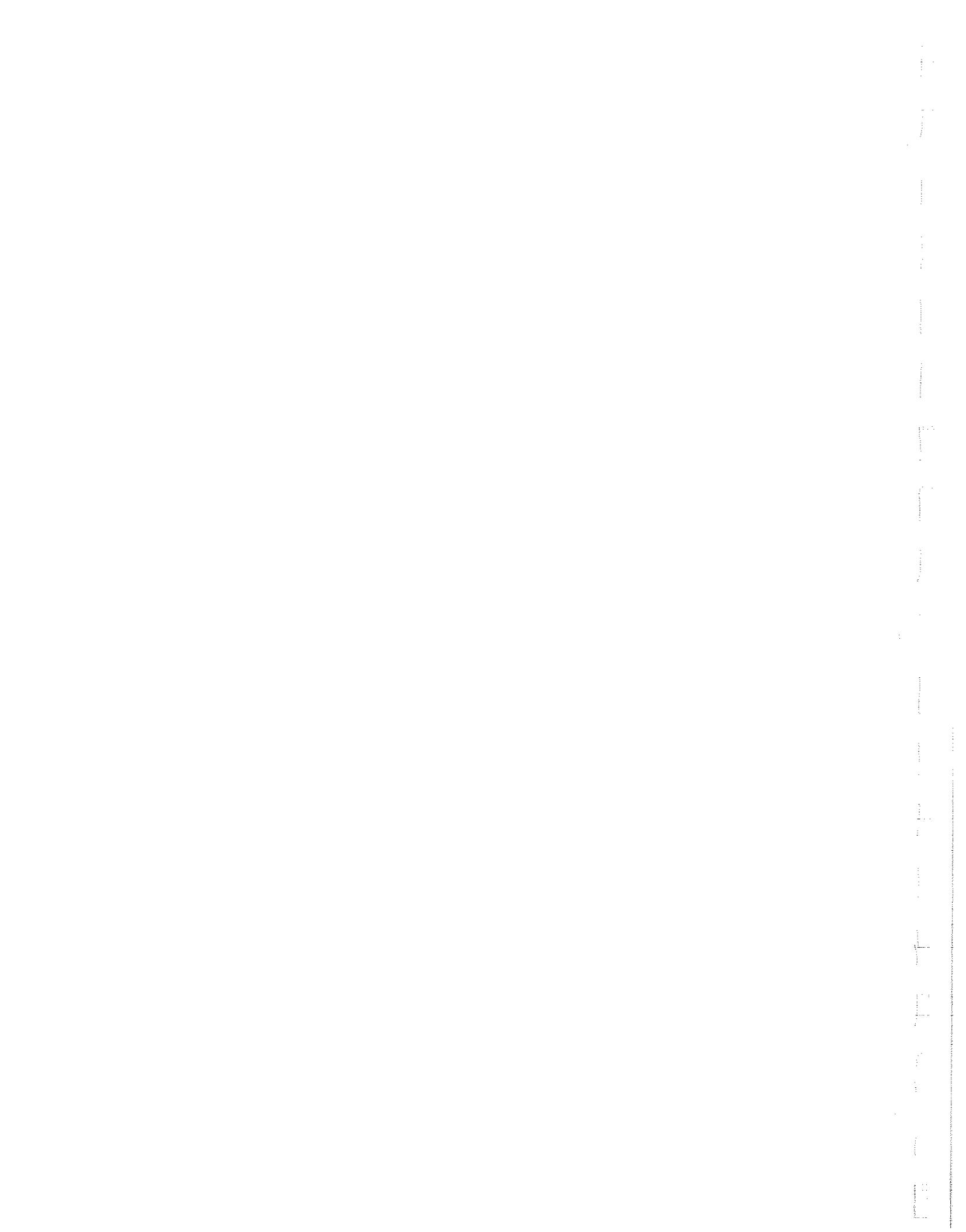
L C R E E K S U B M I T T A L # 8



**Winter-3pm**

SHADES = HADDOCK CONNECTOR

Figure 3-XIV



would lengthen considerably by sunset, cover a substantial portion of the core area, including walkways, lagoon and amphitheater. These shadows are considered a significant impact to visitors and residents in this area. Park and core area usage during evening hours is expected to be high resulting in potentially significant impacts to park and public area use.

Midday shadows (from 11:00 a.m. to 2:00 p.m.) are much shorter than morning and evening shadows, especially during the summer. Winter midday shadows continue to cross portions of the lagoon and the park areas on the west and north, and portions of the core area.

### Mitigation

Significant project impacts were cited to occur as a result of (1) delay of one park and a large majority of parking spaces available for parks public areas until 2009 to 2011; and delay of another park until the years of 2003 to 2005, and the absence in the Phasing Plan of identification of when parks would be developed, 2) a public parking deficiency, 3 (2) lack of information regarding public access routes from areas east of I-5 and from uncertainty of the location of parking lots in relationship to the parks and other public areas, -4 and (3) from evening shadows covering high use park and core areas. Mitigation is possible to reduce three two of these four three significant impacts to below a level of significance. An incremental contribution to a cumulatively significant impact of limited parkland available for the anticipated public usage was also cited.

To mitigate the parking construction delay, and the absence of identification of when the parks would be built, the developer must include parks development and the associated adequate parking (approved by the City) within Phase I.

To mitigate the public access questions, the applicant must submit an access plan, showing designated public parking areas, access routes to public areas, and access routes and signage from the east side of I-5 across "E" Street. This access plan must be approved by the City Planning and Community Development Departments before it would be considered adequate to mitigate the impact.

Mitigation for inadequate parking could be achieved simply by providing the required number of spaces. The City is responsible for the accurate determination of this number, and the applicant for Midbayfront development is responsible for provision of the spaces.

Mitigation to reduce the shadows to a level below significant would require a project redesign to lower the heights of the hotels to a range of 6 to 12 stories. This range would reduce the shadows by at least half. Much of the core area, including the lagoon, amphitheater and walkways would not be shaded during the early evenings when use is expected to be high. This mitigation is not proposed, thus the impact remains significant.

Regarding the adverse and cumulatively significant impact of parkland acreage available for regional demand, as stated earlier, it is infeasible to include a significantly greater amount of parkland because the size of the Midbayfront site is itself about the same size that a regional bayfront park should be. However, a greater amount of parkland, as shown by Alternatives 2 (Existing LCP), 4 (Reduced Density 1A), 5 (Reduced Density 2) or 7

(Reduced Density 3, Modified Design), would help to work toward the City's desired design requirements. Whatever the final resulting park acreage, because of its limited size, it is important that the parkland be contiguous west of Marina Parkway. The current design of the proposed project and Alternatives 3,4— and § have this park area dissected by a restaurant and/or hotel with bungalows, which should be eliminated. Because of the bayfront nature of the adjacent area to the west, uses in these park areas should be passive, such as picnicking (picnic tables and shelters), childrens' play areas and expansive green areas. On the north side, adjacent to the wetland, and in the extreme southwest corner adjacent to the "F" and "G" Street Marsh and its inlet, natural vegetation should exist with no grassy areas or other landscaping in order to discourage public use for reasons of public safety (discourage transient use) and wetland resource protection. At the most, a biking/jogging path could go through this area. Also, for the semi-public uses of the athletic facilities, fees for the public portion of these areas should be minimal or non-existent to encourage public use.

Additionally, the City's Parks and Recreation Department has stated the need to hire one gardener for every five acres of parkland (a total of four), as well as to acquire additional landscaping equipment such as mowers.

#### Analysis of Significance

Significant impacts were cited to inadequacies in the Phasing Plan regarding parks, and ~~public parking, deficiency in number of spaces for public parking, the lack of public access information and shading:~~

1. Phasing Plan does not include parks; includes one park and a majority of public park area parking in Phase V, or in years 2009 to 2011; includes one park in Phase III, or the years 2003 to 2005
2. Potentially insufficient amount of parking for park users;
3. Inadequate information regarding public access from on-site parking areas to parks, and from areas across I-5 to the east to the parks
4. Shade impacts to parks and public areas

Mitigation is possible to reduce the first three impacts to below a level of significance. These measures are:

1. Revision of the Phasing Plan to include the parks and adequate public park parking (as approved by the City) within Phase I.
2. Creation of additional public parking spaces per City requirements to be determined at the project level; and

3. Provision of access plan both on-site and off-site to the east, and approval of plan by City Planning and Community Development Redevelopment Departments, and by Coastal Commission.

Measures 1 and 2 would, however, remain significant and not mitigated at the plan level.

The fourth impact can only be reduced by project redesign, thus, it remains significant and unmitigated at the plan level.

Additionally, an adverse and cumulatively significant impact is expected to occur from anticipated high regional demand placed on the bayfront parks resulting in limited amounts of parkland for anticipated high use. To reduce this impact to a level below significant, the park areas west of Marina Parkway should not be broken up with development, but, rather, should be continuous along the bayfront. The amount of parkland provided by Alternatives 2, 4, 5 or 7 ranges from approximately 20 to 35 percent greater than the project proposal. Provision of a similar amount and of similar design (continuous) would reduce the cumulative impact to below a level of significance. This provision has not occurred, thus, this incremental impact remains significant, although it could be easily mitigated at a future project level phase by project redesign. See the DEIR, Volume I, Sections 4.2.12 and 5.2.11 for discussion of Alternatives 8 and 9.

### **3.13 UTILITY SERVICE**

#### **Existing Setting**

##### **Gas and Electric**

The proposed Midbayfront development locale is provided with energy by San Diego Gas and Electric (SDG&E), Southbay, located at 436 "H" Street, Chula Vista. At the present time the project area is serviced by both electric lines and underground gas lines. Along "F" Street there is an overhead 12,000 volt distribution line and an underground gas line that feeds the boat manufacturing business and water service business at the end of "F" Street. Extending west from "E" Street, another 12,000 volt distribution line parallels the dirt road that runs out to the Nature Interpretive Center. The underground gas line, which terminates just east of Bay Boulevard, has been capped and abandoned by SDG&E (Scott, 1989). Present energy use on site is therefore minimal, consisting of two small businesses and the Interpretive Center.

The City of Chula Vista has in effect a Policy for the Conservation of Energy and Water (9/13/78), which has been incorporated into the Housing Element of the Chula Vista General Plan (8/21/86). Pages 2 and 3 of the Policy include the following principles:

1. All buildings should be solar oriented. The use of solar, wind, or tidal energy in all new and remodeled buildings should be encouraged. Nondepletable and renewable energy sources should be favored by this municipality's plan reviewing agencies, and depletable and nonrenewable sources should be discouraged.
2. The use of landscape materials which are conducive to energy conservation should be encouraged.
3. The use of energy-efficient appliances and equipment should be urged.
4. Builders should be encouraged to install double pane windows, skylights, pilotless gas appliances, fluorescent lighting, and roof and wall insulation where such would be cost effective as well as energy conserving.
5. The municipal officers and agencies charged with the administration and implementation of the Landscape Manual, the Design Manual of the City of Chula Vista, and the Chula Vista Town Centre Design Manual shall consider the importance of energy conservation during the course of their review of public or private projects.

Finally, the Policy states:

Although most of the planning texts confine their discussions on solar orientation to residential structures, this orientation can also be utilized in the planning of commercial, office, and industrial buildings.

## **Fire and Police**

Fire and police protection are provided to the proposed project locale by the City of Chula Vista Fire and Police departments.

### **Police**

The City's threshold objective for police protection is to "ensure that police staff, equipment, and training levels are adequate to provide police service at the desired level throughout the City." The standard identified is to respond to 84 percent of Priority I (life-threatening) calls within 7 minutes, to maintain an average response time to all Priority I emergency calls of 4.5 minutes or less, and to respond to 62 percent of priority II emergency calls within 7 minutes or less and maintain have an average response time for all Priority II (serious, non-routine with a probability of injury) calls of 7 minutes or less.

The Chula Vista Police Department operates out of a headquarters at 276 Fourth Avenue. Over 140 sworn officers operate out of the precinct, and of these, approximately 40 are detectives and 25 are supervisors. Field officers total approximately 85 personnel, divided into three shifts. Taking into account officers on vacation, sick leave, or otherwise unavailable, this results in from five to seven officers generally being able to respond to calls for assistance. Estimated response time City-wide is between 1.5 to 2 minutes, with a maximum time of 4 minutes. The proposed project is located within beats 22 and 24 of the City of Chula Vista, and will remain within those two beats. The long-range plan would be to reconfigure those two beats into three beats (Hawkins, 1989).

### **Fire**

The City's threshold objective for fire service is to "ensure that fire/EMS staff is properly equipped, trained, and funded to provide the desired level of service...." The standard identified is to respond to 85 percent of all calls within 7 minutes or less.

The project area is served by Chula Vista Fire Department Station No. 1, located at 477 "F" Street, approximately .7 mile away from the project site. The estimated response time to the project vicinity is approximately four minutes. The apparatus housed at this station consists of one 1,500 gallons per minute (gpm) pumper truck, one aerial ladder truck and one rescue truck. Fire water flow requirements depend on the type of occupancy and square footage of buildings. Requirements vary from about 1,000 gpm to 5,000 gpm. Installation of sprinkler systems reduces the required amount of fire-flow water by approximately half (Gove, 1989).

### **Solid Waste**

The project location is within the service area of Laidlaw Waste Systems, P.O. Box 967, Chula Vista. Within their service area, Laidlaw Waste Systems currently uses 15 trucks for residential pick-up and 10 trucks for commercial/industrial service. Each of the residential units can pick up 250 residences per load, and carry two loads per day. The commercial

units can each empty 65 of the three-yard trash bins per load, and can also complete 2 loads per day.

Loads collected are disposed of at the County-owned Otay landfill on Maxwell Road. This facility is just off Otay Valley Road; approximately 1.0 mile east of I-805 and approximately 6.0 miles away from the project site. The current (June 1989) projected life-span of the Otay Landfill is 10 years. The County is currently evaluating future sites in eastern and northern portions of the County (Kaliri, 1989).

#### **Sewer**

The City of Chula Vista operates and maintains its own sanitary sewer system. This system connects to the City of San Diego Metropolitan Sewer System (METRO). The entire METRO system within the City of Chula Vista consists of approximately 270 miles of sewers ranging in size from 6 to 36 inches, 10 raw sewage pump stations, and 4 independent metered connections to METRO.

The City, as a member of the METRO system, has contracted for a specific amount of "capacity rights" within the existing system. This capacity is equivalent to 17.1 million gallons per day (mgd) average daily flow. An additional 2.0 mgd was obtained when the City took over operations of the Montgomery Sanitation District, bringing the total capacity for Chula Vista to 19.1 mgd (Roller, 1989).

The City's threshold is:

1. Sewage flows and volumes shall not exceed City Engineering Standards.
2. The City shall annually provide the San Diego Metropolitan Sewer Authority (METRO) with a 12 to 15 month development forecast and request confirmation that the projection is within the City's purchased capacity rights; and an evaluation request from METRO of their ability to accommodate the forecast and continuing growth. If METRO does not provide the information, the City Engineering Department staff shall gather the necessary data. The information provided to the Growth Management Oversight Committee (GMOC) shall include the following:
  - a. Amount of current capacity now used or committed.
  - b. Ability of affected facilities to absorb forecast growth.
  - c. Evaluation of funding and site availability for projected new facilities.
  - d. Other relevant information.

#### **Water**

Information for this section was provided by Jon Matusek of the Metropolitan Water District and Joe Gray of the Sweetwater Authority.

The project area is within the service district of the Sweetwater Authority which provides direct water service to residents. The Sweetwater Authority in turn receives its water from

the San Diego County Water Authority (CWA). The CWA is one of 27 member agencies (which also includes 14 cities and 12 municipal water districts) which receives its water from the Metropolitan Water District (MWD). MWD imports water from two sources: the Colorado River via the Colorado River Aqueduct and the State Water Project via the California Aqueduct. Another less reliable source of water comes from runoff captured in reservoirs or natural replenishment of groundwater basins by rainfall.

Water is distributed to surrounding area residents via underground pipes of various sizes. Because of limited on-site uses, current infrastructure consists of an 8 inch main providing water to the Chula Vista Interpreter Center, and an 8 inch main along "F" Street providing service to the industrial uses at the termination of "F" Street.

The City's Threshold goal is "to ensure that adequate supplies of quality (appropriate for intended use) water are available to the City of Chula Vista. In conjunction, the identified objectives are as follow:

1. Ensure that adequate storage, treatment and transmission facilities are constructed concurrently with planned growth.
2. Ensure that water quality standards are not jeopardized during growth and construction.

### Schools

The project is located within the attendance areas of Chula Vista City School District (CVCSD) and the Sweetwater Union High School District (SUHSD). The City's threshold objective is to "provide school district personnel with current development forecasts so that they may plan and implement school building and or allocation programs in a timely manner. In conjunction with this, the policy's goal is "To ensure that the Chula Vista City School District and Sweetwater Union Unified District have the necessary school sites and funds to meet the needs of students in new development areas in a timely manner."

The project is listed within the attendance areas of Feaster and Vista Square elementary schools, and Chula Vista Jr. High and Chula Vista High schools. Feaster and Vista Square elementary schools are currently experiencing severe overcrowding (Shurson, 1989) while Chula Vista Jr. and Chula Vista High schools are at 125 percent and 135 percent permanent capacity, respectively (Silva, 1989).

Demographic studies completed by the Chula Vista City School District indicate that an increase in the area population, higher densities, and redevelopment have all contributed to this problem and are expected to continue. Although trailer classrooms and relocatable classrooms have been brought in for both the junior and high schools to house 600 students, the School District is seeking a permanent solution.

## Impacts

The following impacts pertain to the proposed project. Similar, but reduced impacts would occur for the alternatives. See the DEIR, Volume I, Sections 4.2.13 and 5.2.12 for discussions of Alternatives 8 and 9.

### **Gas and Electric**

Development allowed under the proposed LCPR No. 8 would require power from SDG&E, though it is difficult to assess the quantity of gas and electric which would be needed because the types of commercial and industrial business park uses are unknown. Power for the residential and hotel uses is expected to total a minimum of 4,480,875 1,702,500 kw electrical and 62,000 therms of gas use a month if a combination of gas and electric resources are used. If only electrical resources are required, monthly usage for residential units and hotels will require a minimum of 1,601,775 kw a month.

These figures are based on the assumptions that 1) multi-family dwellings use 300 kwh/mo and 30 40 therms/mo when usage is of both gas and electric and 2) that motel usage totals .75 kwh/mo per square foot. These figures provide minimum usage rates as the number of pools (at 400 therms/mo) and other associated facilities are presently undetermined.

Retail/restaurant and office square footage (a total of 790,000 s.f.) will also require a minimum of 15,800,000 kwh/mo. This is based on average usage of 2 kwh/s.f./mo for office space/small retail and restaurants. It provides a minimum projected drain as larger stores require a greater kwh per square foot and both the larger stores and restaurants also utilize therms per month; figures are not provided here as actual areal usage is presently undetermined.

Existing site circuits will need to be rearranged and extended to meet new demands. The above-ground distribution lines will need to be replaced by a larger underground "backbone" system which will feed each new building as it is built. Also, the presence of a co-generation system may require a specially designed power system with a primary and secondary power source. This secondary system would become active in the event of the co-generation's primary power source being shut down.

Though SDG&E is in the business of providing power to service demand, and can provide power for development as proposed, there remains an incremental contribution to cumulative impact to non-renewable energy resources (fossil fuels) which SDG&E both burns and purchases in order to provide energy to the San Diego area.

### **Fire and Police**

#### Police

The proposed project will result in an increased permanent population in a largely undeveloped area of Chula Vista. This will place additional demand on the City's Police Department. Currently, in the Midbayfront and NWR areas, only the Nature Interpretive

Center and one industrial use require police protection, and these all have very low numbers of calls requiring a response by police.

The City's current officer to population ratio is 1.2 officers per 1,000 citizens. At build-out, the project should increase the City's population by approximately 3,000 residents, and an unknown number of people employed in the project area. Using an estimated new population served of 5,643 persons (Hawkins, 1989), the department would require an additional 6.8 new police officers at the 1.2:1,000 ratio. As the project would achieve projected build-out approximately three or four years after construction commences, hiring will take place on an as-needed basis, and would not significantly impact police protection.

Assuming that police personnel and equipment are upgraded to meet the demand of the increased population, no significant impacts will result from the proposed project (Hawkins, 1989). Additionally, no impacts would occur to the City's threshold policy.

#### Fire

The development of urban, commercial and industrial uses in a currently mostly undeveloped area would place additional demand on the Fire Department to provide service. This would include not only fire/EMS protection, but an additional impact on inspection services as well.

In anticipation of a large increase in fire/EMS throughout the City, the City of Chula Vista has prepared a draft fire station location study. The study reviews the long-term needs of the City as they relate to fire protection. The document has highlighted areas of possible fire coverage deficiency, mostly in the expanding eastern territories. As a result, three fire stations have been scheduled for relocation, which would result in 98.8 percent of the planning areas dwelling units being within a seven minute response time at project population buildup (Draft Fire Station Master Plan, 1989). Without the Midbayfront Development, the Fire Department was considering relocating the ladder truck to the Rancho del Rey station in eastern Chula Vista. With the proposed high-rise buildings in the Midbayfront, relocation of the ladder truck would not occur. Instead, an additional ladder truck and four-person crew would have to be placed in service in the easterly portion of the City, possibly at the Rancho del Rey station. The cost of the ladder truck (1990 prices) would be \$400,000, and the four-person crew would cost approximately \$780,000 annually (Lopez, 1990). Also, an additional fire inspector would be necessary to handle increased workload due to plan review, site inspections, routine fire safety inspections and educational programs (Gove, 1990).

In summary, fire/EMS services will be provided for all planned development, including the Midbayfront proposal. However, impacts from development of this project will create significant impacts due to the increased inspections, testing of fire protection systems, and public education programs (Gove, 1990).

## **Solid Waste**

The residential portion of the proposed project includes 463 two-bedroom and 1087 one-bedroom units. ~~The residences would require the partial services of one truck which would be run once a week.~~ These residences would generate sufficient trash to require three trucks making two trips as well as the partial services of a fourth truck making one trip, once a week.

Impacts resulting from the proposed industrial and commercial uses of the project are more difficult to project, as precise use of space is not yet known. At this point in time, however, approximately 55 percent of the available commercial space is designed to accommodate uses from 1,000 to 3,000 s.f. This breaks down to approximately 43 businesses. Another 25 percent will accommodate uses from 5,000 to 7,000 s.f. The final 20 percent, or 30,000 s.f., will contain a food market. With the majority of commercial space being used for office and small retail businesses, it is anticipated that the amount of trash produced by these types of uses will not be significant, and will therefore not be a problem for Laidlaw Waste to service.

Because landfill space in San Diego County is extremely limited and continuing to decline rapidly, the solid waste from the project area would represent an incremental portion of a cumulative impact to this space.

## **Sewer**

The City's ability to serve the project is governed by two factors: capacity rights and infrastructure. The City currently has capacity rights with METRO of 19.2 million gallons per day (mgd). The existing (April 1990) average daily wastewater volume for Chula Vista is 10.5 mgd, which leaves an available capacity of 8.7 mgd. The proposed Midbayfront development would generate approximately ~~0.5 to 0.8~~ ~~0.3~~ mgd which represents approximately ~~6 to 9~~ ~~3~~ percent of the remaining available capacity. The project would drain to an existing outlet north by Marina Parkway where metering facilities would be constructed. No detailed plans are available yet.

The project sewage generation would not significantly impact the City's capacity with the METRO system, and, until detailed plans for infrastructure become available, impacts to infrastructure are considered significant.

## **Water**

Project impacts would be governed by two factors, the first being the existing infrastructure of water mains that would be providing water to the project site. The Sweetwater Authority has completed a project analysis which determined what improvements to the existing infrastructure would need to be completed in order for the system to provide the required 5,000 gpm for fire flow and 2,000 gpm for domestic demands. The results of the analysis indicated that the existing on-site and off-site water mains are inadequate to serve the project, thus causing potentially significant impacts to water service, and, to the City's threshold policy. However, the LCPR No. 8 text states that the

basic water service proposed for the area consists of 12 and 16-inch mains in "E" Street, Marina Parkway, "F" Street (Lagoon Drive), and "G" Street. The static water pressure is 70 to 100 psi. A 14-inch waterline in "G" Street connects the lines in Bay Boulevard and Marina Parkway. This pipeline is necessary to maintain a looped system during development of the project. An easement for pipeline operation shall be maintained even though the area might be fenced for security reasons by Rohr Corporation.

The City of Chula Vista Engineering Department and Sweetwater Authority must review the proposed infrastructure to determine whether the proposed system would adequately mitigate the potential water service impacts.

The second factor is the availability of water from the Sweetwater Authority. While the size of the development would greatly add to the area demand for water, the Sweetwater Authority has determined that it can provide adequate amounts of water to the project site if analysis recommendations are followed. However, the regional issue of water supply versus current and future demands is also important. Based on Sweetwater Authority's generation rates, the projected project demand is as follows:

| <u>Proposed Use</u>                      | <u>Generation Rate</u>     | <u>Units</u>                                     | <u>Projected Consumption</u>            |
|------------------------------------------|----------------------------|--------------------------------------------------|-----------------------------------------|
| Residential<br>(high density)            | 110 gallons/<br>capita/day | 1,550<br>(2,790 people)                          | 306,900 gal/day<br>= 346 acre-feet/year |
| Hotel                                    | 8.0 acre-feet/<br>year     | 2,028 totaling<br>1,650.00 s.f.<br>(37.87 acres) | 303 acre-feet/year                      |
| Commercial (Retail<br>and Office)        | 1.5 acre-feet/<br>year     | 790,000 s.f.<br>(18.13 acres)                    | 27 acre-feet/year                       |
| Public/Quasi-Public<br>(including parks) | 2.0 acre-feet/<br>year     | 38.25 acres                                      | 76.5 acre-feet/year                     |
| <b>TOTAL CONSUMPTION</b>                 |                            |                                                  | <b>752.5 acre-feet/year</b>             |

Source: Sweetwater Authority

Based on these calculations, and the amount of water Sweetwater Authority receives from CWA (approximately 26,000 acre-feet/year), the project would represent approximately 2.8 percent of the Sweetwater Authority's past and present allotment. If this allotment were reduced due to the factors described earlier, then the project would represent a greater percentage.

The LCPR No. 8 text does not quantify the amount of water necessary to fill the lagoons, yet it does say that the 10-acre lagoon would be salt water and would use wells to supply the water. A separate summary letter report (Geocon, 1990) references estimated water supply

to be approximately 82 gallons per minute (gpm) in July, with an annual daily average of 50 gpm. Geocon prepared a limited hydrologic investigation to determine the available groundwater supply to support the proposed 10-acre salt water lagoon (Appendix G). Their investigation did not include the smaller 2.6 acre semi-public lagoon. The conclusion was tentative, based on the assumption that a number of wells (number not specified) would be completed to provide the required amount of water, and that aquifer conditions found at existing wells are representative of Midbayfront conditions. Based on completion of the wells, and assumedly a positive result of these unknown conditions, they thought the supply requirements of the 10-acre lagoon could be met with wells.

The conclusion regarding level of impact cannot be made until further testing and verification of well supply can be made for both lagoons. Also, information must be provided to show the proposed well locations and engineering design of the circulation system. Until that time, a conclusion of a potentially significant impact to water must be made.

The project would incrementally contribute to a regionally significant demand on water resources. Southern California demand continues to increase, while supply from the Colorado River will continue to decrease (due to legal commitments to the Upper Basin).

### Schools

The project has the potential to produce approximately 930 [1536] elementary school children (Shurson, 1989, 1990). The children would be within the attendance areas of Mae L. Feaster Elementary School and Vista Square Elementary School. At the junior high school and high school levels the project would add approximately 295 junior high school and 155 high school students (Silva, 1989). These students would be within the attendance districts of Chula Vista Junior High School and Chula Vista High School.

As a result of the influx of school children to both school districts, significant impacts would occur that would decrease both Districts' ability to adequately serve the needs of the students. Additionally, the City's threshold standards would not be met.

Also, the location of I-5 between the project area and the schools would prohibit the feasibility of students walking to existing schools, and the potential transportation costs would be significant (Silva). Additional operating costs would include annual operating costs for school transportation, and either relocatable classroom costs or permanent classroom costs.

### Mitigation

#### Gas and Electric

Cumulative energy resource impacts can be mitigated to some extent by such generally accepted methods as sealing doors and windows, double-pane glass, increases in wall and ceiling insulation, and the incorporation of solar benefits. Time-controlled lighting systems

throughout the industrial/commercial portions of the project would also lower electrical costs.

## **Fire and Police**

### **Police**

The project, as proposed, will not significantly impact the Police Department's ability to provide service to the area. As such, no mitigation will be necessary. Although no mitigation is required, preventative measures should be implemented at the neighborhood level in order to minimize the increased demands for police protection. This includes the organization of crime watch programs that can help add to the level of protection for the project area.

### **Fire**

The following measures are required by the City Fire Department to reduce the significant impacts to below a level of significance:

1. Maximum fire flow should be 5,000 gpm.
2. Fire department roadway access shall be provided to within 150 feet of all portions of any building.
3. All roadway widths shall be a minimum of 20 feet wide.
4. All apartments, three stories in height or containing more than 15 dwelling units and every hotel three or more stories in height or containing 20 or more guest rooms shall be provided with a fully automatic fire sprinkler system.
5. A fire alarm/excavation system shall be provided for all public assembly, and multi-residential occupancies.
6. All Title 1924 CCR shall apply relative to public assembly and high rise occupancies.
7. Fire department access roadways greater in length than 150 feet shall be provided with the provision for the turning around of fire apparatus (either a 75 X 24 foot hammerhead or a 40 foot radius cul-de-sac).
8. Private fire hydrants will be required to satisfy the requirement that any part of the ground floor of any building shall be within 150 feet of a water supply. These hydrants shall be in place and operable prior to the delivery of combustible building materials.
9. Public fire hydrants will be required every 300 feet on public streets. However, if the location of major buildings is unknown, hydrants may be located specific to the buildings. This would result in more effective coverage, and could possibly result in

fewer fire hydrants. For design interest, there are hydrants manufactured which have a lower profile than the traditional barrel type.

10. Address signs - Easily readable signs which can be seen from the street are necessary, using large, contrasting block letters and numbers.
11. Additional fire inspector would be necessary to handle additional work load created by this project.

Additionally, the applicant is responsible for payment of the additional ladder truck through the Developer Impact Fee, and the City's general fund would pay for the increase in annual salary for the four-person crew ~~and fire inspector~~ (Lopez, 1990).

### **Solid Waste**

In order to reduce the volume of trash which contributes to the incremental impact, a recycling program should be undertaken by the developer in conjunction with a local recycling company. This would include bins on site for the collection of recyclable materials such as glass, plastic, metal and paper products. Additionally, the development should incorporate trash compactors to reduce volume. This would not only reduce the number of trips to the Otay Landfill, but the space required there as well. Trash compaction and recycling would serve to lessen the impacts to the Otay Landfill.

### **Sewer**

Because the City has existing capacity within the METRO system, no significant impacts to capacity would occur from the proposed project. However, the developer must submit detailed drawings to the City showing sewer line locations and capacities. The City Engineering Department must review the plans for consistency with the thresholds policy and with the system (which the project will tie into). Approval of these plans by the Engineering Department would eliminate the potential significant impact.

### **Water**

The Sweetwater Authority analysis indicated specific areas where upgrading of water mains must be completed. These include:

- A 12 inch main in "F" Street from Broadway to approximately 830 feet west must be installed.
- A 12 inch main in Bay Boulevard from Moss Street to about Sierra Way extension westerly must be installed. (This will connect the project with supplies of water from the southern portion of Chula Vista, thus providing the project site with two sources of water instead of one.)
- The existing 8 inch main along "F" Street from Bay Boulevard running west must be upgraded to a 12 inch main.

- All on-site mains must be sized 12 inches.

Installation of these water mains would eliminate the potential significant impacts to infrastructure.

To mitigate the incremental impact to regional water supply, the applicant must provide water conservation measures at the project level design, including such elements as low flow showers, low flush toilets, timed irrigation, landscaping by drought-tolerant species, drip irrigation where appropriate and development of reclaimed water lines for future use.

The potentially significant impact to water supply and adequacy of engineering systems for both of the lagoons could be mitigated by City Engineering Department review and approval of this required information and plans for the systems. If review shows that quantity and quality of water are not adequate, then a separate source must be found. The San Diego Bay is a possible, feasible source.

~~Regarding incremental impacts to area water supply because of increasing regional demands, the developer must incorporate methods of water conservation such as reduced flow shower heads, low volume toilets and timed sprinkler systems. These measures would help reduce demands for water.~~

### Schools

Both school districts have expressed great concern over the impacts to area schools from the development. Likewise, both school districts agree that ~~only one method of mitigation would be acceptable mitigation in this case, and that~~ would be the project's participation in a Mello-Roos Community Facilities District (CFD), and provision of a secondary school site and an elementary school site. For further discussion on this topic, see responses and comments J and K in Volume I).

Mello-Roos districts (enacted in 1982 by the Mello-Roos Community Facilities Act) are special assessment districts, defined by specifically designated boundaries, through which a local government is empowered to levy special taxes and issue bonds. These funds can then be used to provide financing for public facilities within the district.

Although new Mello-Roos districts could be formed for the project, two districts currently exist which could provide for the project's required mitigation. For the Chula Vista School District, CFD No. 4 could annex the project to its jurisdiction, and the Sweetwater Union High School District's CFD No. 5 could annex the project to its jurisdiction. Through the project being included in these existing CFDs, funds would be provided through special taxes and bonds, that could be used to provide additional facilities for school children. The inclusion of the project to the CFDs would also serve to provide the developer's a portion of ~~the required mitigation for project related impacts. This means that although the developer would pay funds to the CFDs thereby relieving him of further responsibility conditions in area schools would not be altered until such a time as the responsible school district's allocated the funds to provide more schools and classrooms.~~

School transportation costs, Annual operating costs for school transportation, and Either relocatable classroom costs or permanent classroom costs could/would not be covered by funding from a new the Mello-Roos Community Facilities District. monies, thus, at this time, no financing mechanism exists to mitigate this impact, and it remains potentially significant. Annual costs for student transportation including bus maintenance and driver's salaries are not, however, eligible for Mello-Roos funding. These costs need to be funded by either a cash contribution from the applicant or a long-term binding agreement with the applicant to finance annual transportation costs.

Also, a provision of both a secondary school site for the Sweetwater Union High School District; and provision of sites and financing for two and one-half new elementary schools for the Chula Vista City School District would be necessary. Site criteria for the Chula Vista School district call for ten net usable acres to house 600 students, and other District and State criteria must also be met. Financing for these new facilities could be provided through the Mello-Roos Community Facilities District *and/or alternative financing methods*. At this time no school sites are proposed, thus mitigation is not achieved at the program level. However, mitigation could be achievable at the project level.

### **Analysis of Significance**

#### **Gas and Electric**

The Midbayfront development project ~~as well as Alternatives 2, 3, 4, 5, 7, 8 and 9~~ will require modifications to the existing SDG&E service system, as well as an increase in the amount of energy to the site. Cumulative impacts to non-renewable energy resources would result from the increase in area energy consumption; however, this is not considered significant at the project level. Even so, Title 24 of the California Administration Code requires energy saving devices in new construction, including increases in insulation and double-pane windows. Developers are required by local governments to comply with these requirements.

#### **Fire and Police**

The proposed Midbayfront Development Plan ~~as well as the alternatives~~ would significantly impact the City Fire Department's services, and would require acquisition of a ladder truck and employment of four new personnel. Measures are required by the Department to reduce these impacts to a level below significant; the costs for the ladder truck and personnel would be paid for by the developer and the City, respectively.

There will be no significant impacts to the provision of police protection by the proposed project ~~or Alternatives 2, 3, 4, 5, 7, 8 and 9~~.

#### **Solid Waste**

Although the Midbayfront project will result in increased service to an area previously lightly served, and an incremental reduction in the lifespan of the Otay Landfill, no significant project-related impacts are anticipated to occur. These impacts would be similar for the

**alternatives.** The majority of the surrounding area is fully developed, and much of this development consists of industrial uses which generate relatively small amounts of trash. As the trash pick-up service is presently operating with more capacity than is required, adequate service would occur. However, because of the project's incremental contribution to regional significant concerns regarding landfill space, the developer should incorporate recycling programs into the development, including bins for paper, plastic, metals and glass. Additionally, all units should have trash compactors to reduce the remaining volume.

#### Sewer

Review and approval of the proposed infrastructure by the City Engineering Department would eliminate the potentially significant impact to adequacy of infrastructure from the proposed project or alternatives.

#### Water

Potentially significant impacts to on-site and off-site infrastructure, water supply for the lagoons, adequate supply and circulation systems for the lagoons, and impacts to regional water supply were cited. These impacts apply to the proposed project and Alternatives 2, 3, 4, 5, 7, 8 and 9, and could be mitigated by installation of Sweetwater Authority recommended improvements, review and approval of the lagoon systems and groundwater quality, and service of water by the City Engineering Department, and implementation of water conservation devices.

#### Schools

The inclusion of the project into the Mello-Roos districts would provide for the collection of funds that could be used to finance items such as buses, relocatable classrooms, permanent classrooms, and property on which those facilities could be located. Annual costs for student transportation including bus maintenance and drivers' salaries are not, however, eligible for Mello-Roos funding. These costs need to be funded by either a cash contribution from the applicant or a long-term binding agreement with the applicant to finance annual school transportation costs. ~~be spent to help ease area school overcrowding, thus reducing the developer's portion of overcrowding related impacts to a level below significant. However, the costs to the District to transport students would remain unresolved, and, therefore, significant. A school site in the Midbayfront area would reduce the cost of transporting all the students to a school across the freeway, and the impact would be reduced to a level below significant. Also, new school sites are being required by the Districts, including one secondary school site, and two and one-half elementary school sites. At this time, no school site is proposed; however, this is a measure which could be achieved at the project level of CEQA compliance.~~

### **3.14 TRANSPORTATION/ACCESS**

The Transportation/Access section of the original Draft EIR was based on a technical analysis of five primary land use alternatives for the project site:

- The Proposed LCP Resubmittal No. 8
- Alternative 1 (No-Project)
- Alternative 2 (Certified Local Coastal Program)
- Alternative 4 (Reduced Density 1A) (Also Applies to Alternative 3)
- Alternative 5 (Reduced Density 2) (Also Applies to Alternative 7)

#### **Scope of Analysis for Recirculated Draft EIR**

As a result of public comments received during the review of the original Draft EIR, the traffic analysis was expanded. The Existing Setting has been expanded to include the analysis of five additional intersections and additional arterials that would be potentially impacted by the proposed development. The additional arterials and intersections were only evaluated under the proposed project and the no-project alternative. The new arterials included in this revised analysis are:

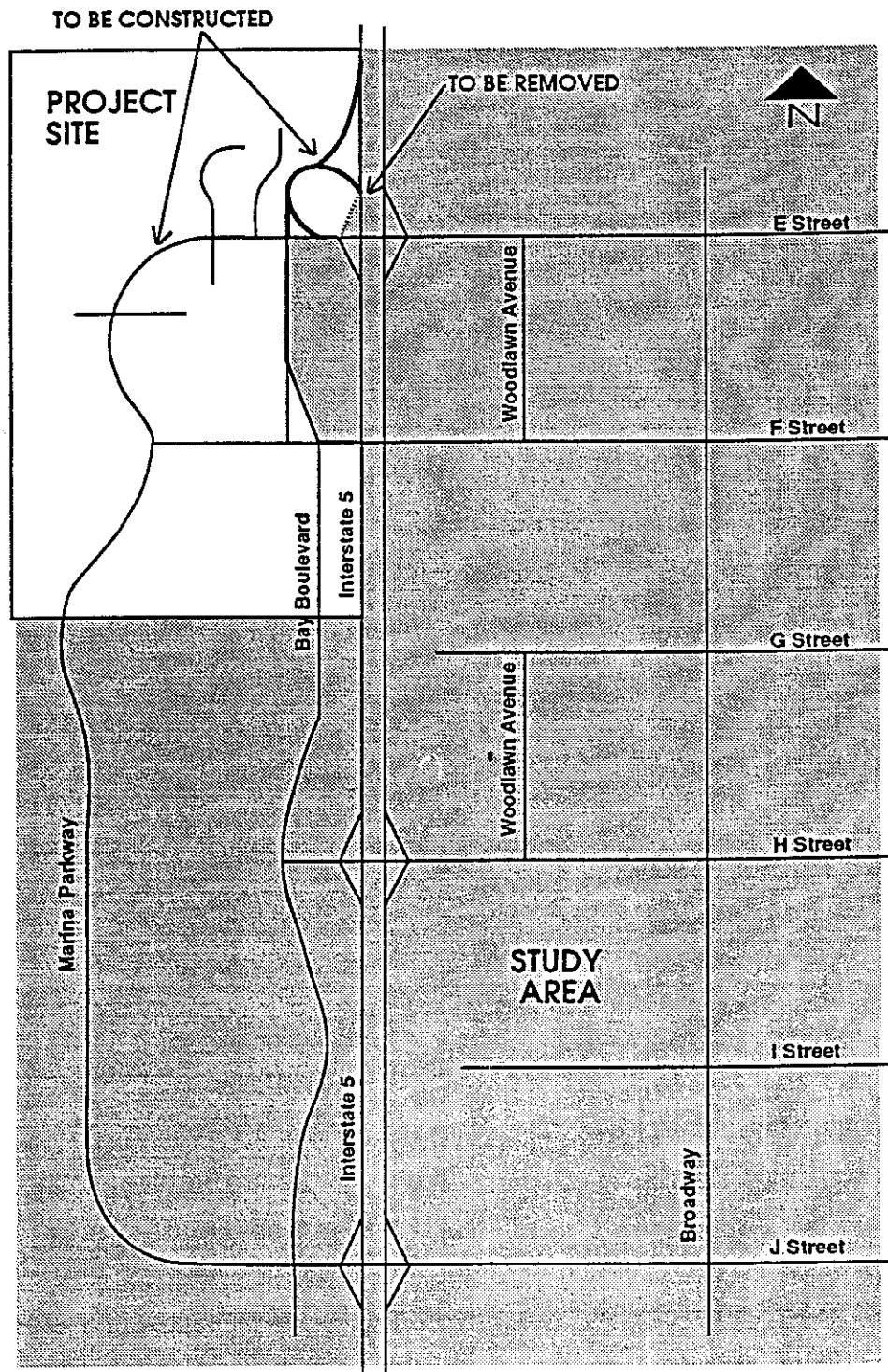
- "E" Street between 5th Avenue and Woodlawn Avenue
- "F" Street between 5th Avenue and Woodlawn Avenue
- "H" Street between 5th Avenue and Interstate 5
- Broadway between "E" Street and "J" Street
- Woodlawn Avenue between "E" Street and "F" Street

The new intersections are:

- "E" Street/Woodlawn Avenue
- "E" Street/Broadway
- "F" Street/Woodlawn Avenue
- "F" Street/Broadway
- "H" Street/Broadway

The "expanded" study area for this project, shown in Figure 3-XV-A, with the proposed circulation network, is within the boundaries of Marina Parkway to the west, "D" Street to the north, Fifth Avenue to the east, and "L" Street to the south. The study area includes the interchanges of I-5 at "E," "H," and "J" Streets. These interchanges are currently full diamond interchanges.

In addition to the incorporation of additional intersections in the analysis of the proposed project and the no-project alternatives, the revised traffic analysis for the proposed project and all of the alternatives is based upon a number of revised assumptions regarding future conditions. Assumptions incorporated into the recirculated draft EIR traffic analysis for the proposed project and all of the alternatives include the following:



Supplemental Traffic Data Analysis  
JHK & Associates

EXPANDED STUDY AREA

Figure 3-XV-A



### Bay Boulevard

Bay Boulevard would serve as the south (northbound) approach to the newly constructed intersection of I-5 Southbound Ramp/"E" Street, but access to Bay Boulevard north of "E" Street would not be provided at this intersection. Access to Bay Boulevard north of "E" Street will be provided to the west of the realigned off-ramp, possibly on streets planned for the proposed project.

### Woodlawn Avenue

As recommended in the General Plan, it was assumed that approximately 50 percent of the redevelopment which is proposed for the Woodlawn Avenue corridor would occur by the Year 2000. This Year 2000 planning horizon coincides with the build-out of the proposed Midbayfront development project. Thus, for our study, it was assumed that Woodlawn Avenue, between "E" Street and "H" Street, would be constructed to four-lane Class I collector standards as recommended in the adopted City of Chula Vista General Plan Circulation Element by Year 2000. The General Plan calls for the generation of 30,000 to 40,000 new trips due to Woodlawn Corridor Redevelopment. For this analysis, we assumed that 50%, (20,000 trips per day) of the Woodlawn Corridor Redevelopment would be accomplished by Year 2000.

This revised transportation/access section of the DEIR is based on information from the technical appendix (Appendix H) which was used to define the expanded existing setting, new transportation/access-related impacts, and mitigation measures required for each of the alternatives which were analyzed in the original DEIR or the recirculated Draft EIR document.

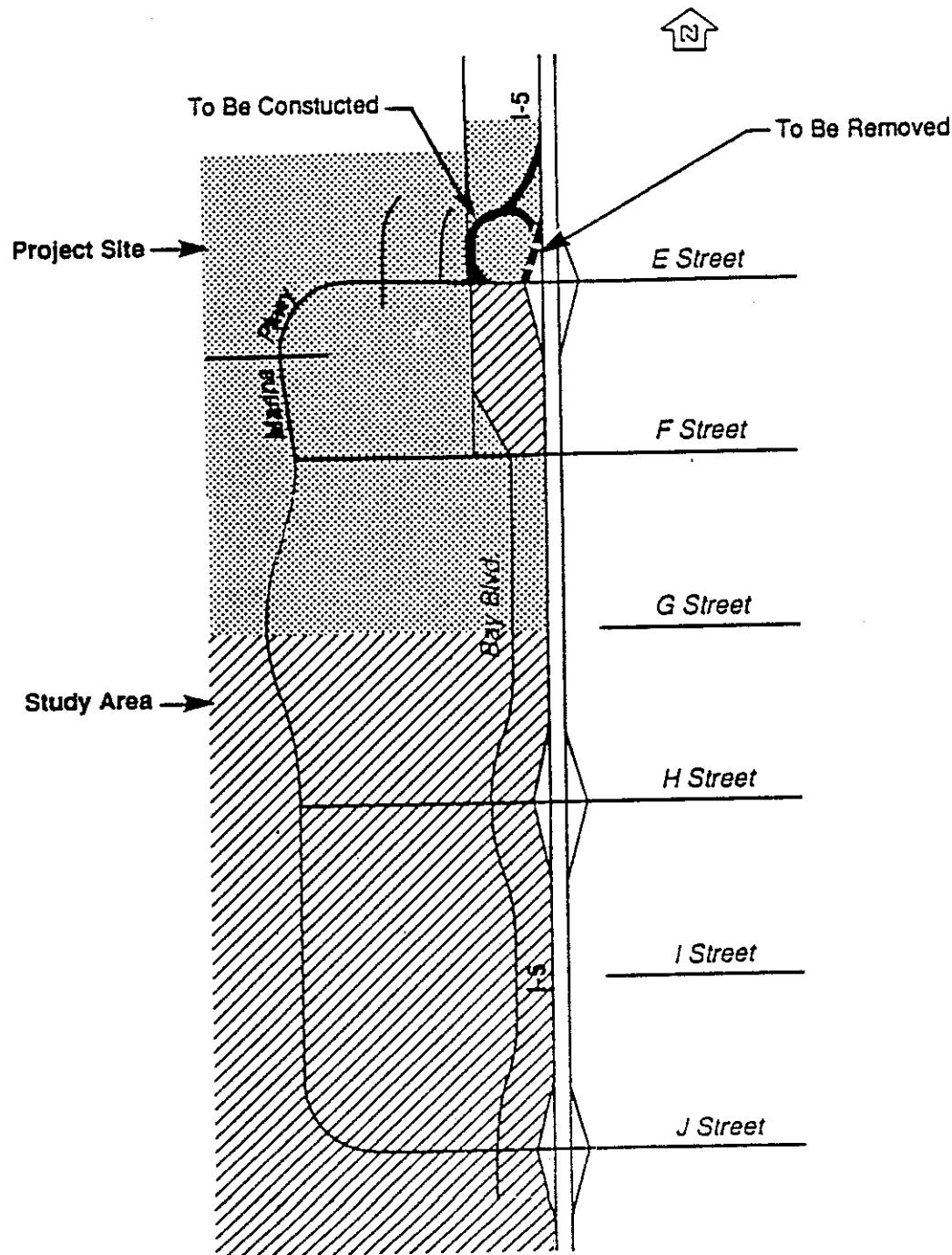
### Existing Setting

The study area for Alternatives 2, 4, and 5, this project, shown in Figure 2-H 3-XV-B with the proposed circulation network, is within the bayfront area between "E" Street and an area just south of "J" Street and includes the interchanges on I-5 at "E," "H," and "J" Streets. As previously explained, the study area for the proposed project and the no-project alternative were expanded. The three interchanges are currently full diamond interchanges. Figure 3-XV shows average daily traffic volumes (ADT) on the existing network in the study area. Most of the traffic generated by the project from locations outside Chula Vista will access the site via the I-5 and "E" Street interchange. "E" Street will also provide the primary access to the site for trips originating in Chula Vista.

I-5 is an eight-lane freeway in the vicinity of the bayfront area. It extends southward to the California-Mexico border and to the north through downtown San Diego, providing interstate travel through California, Oregon and Washington. The current ADT volume on I-5 is 136,000 vehicles per day (vpd) north of "E" Street and 121,000 vpd south of "J" Street.

"E" Street is a four-lane collector street with an east-west orientation. It extends from its current western terminus at Bay Boulevard to an interchange at I-805. "E" Street has an

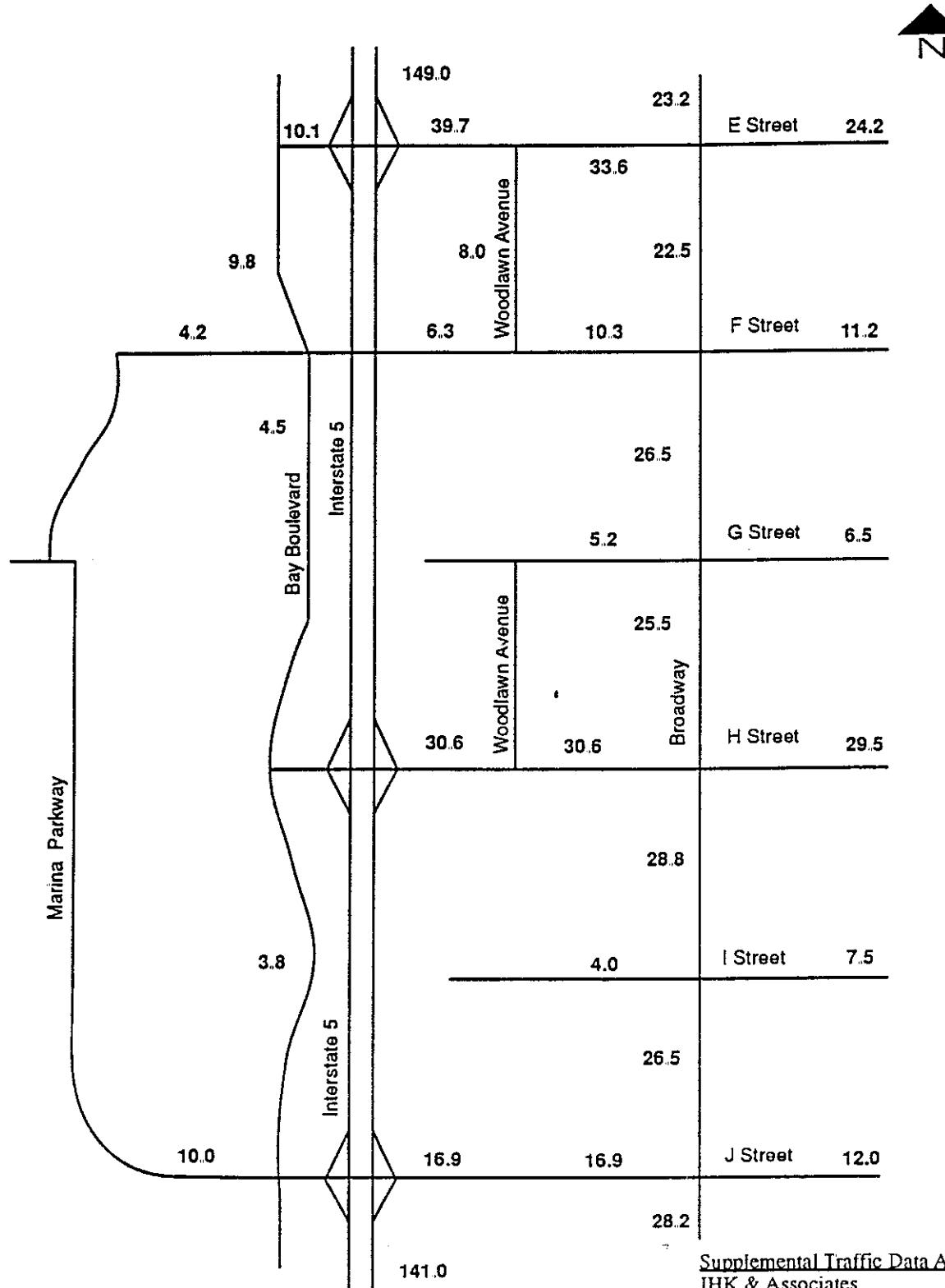




**Study Area for  
Alternatives 2,4, and 5**

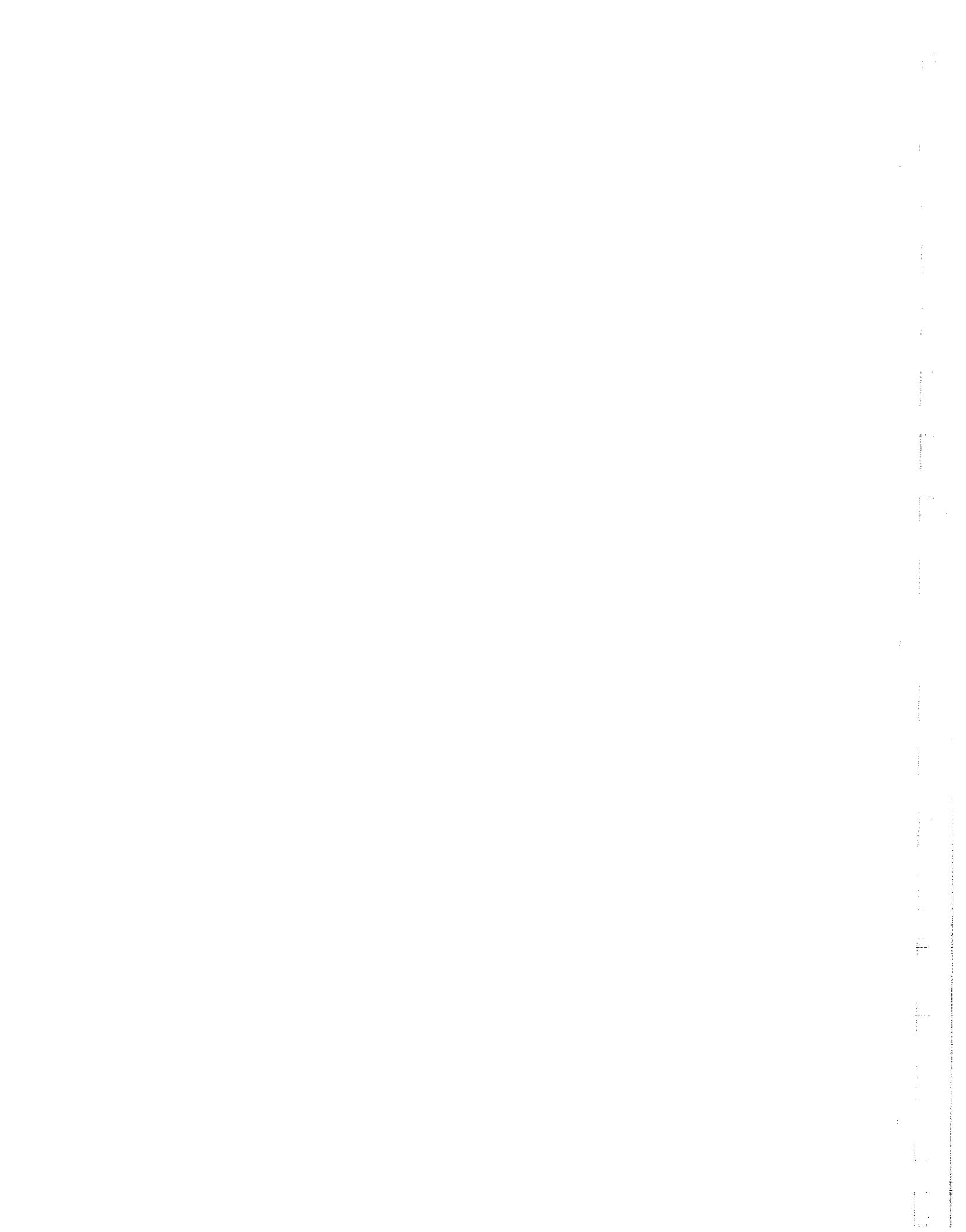
**Figure 3-XV-B**





AVERAGE DAILY TRAFFIC VOLUME (IN THOUSANDS)  
EXISTING YEAR 1990

Figure 3-XV



ADT of 37,200 vpd east of I-5, and between Bay Boulevard and "E" Street the ADT is approximately 6,000 vpd.

"H" Street and "J" Street also provide east-west circulation through Chula Vista to I-805. "H" Street is classified as a four-lane collector street and has interchanges at both I-5 and I-805. "J" Street is a two-lane collector with an interchange at I-5 only. "F" Street and "G" Street are both east-west streets located between the "E" Street and "H" Street interchanges on I-5. "F" Street crosses over the interstate and extends into the tidelands area, while "G" Street is discontinuous with a break at I-5.

The San Diego Trolley runs parallel to I-5 along the east side of the freeway through Chula Vista with stations located near "E" Street, "H" Street, and Palomar Street. The capacity of streets crossing the San Diego Trolley tracks and nearby intersections is reduced due to stoppages in traffic as the trolley passes. This reduction in capacity is due to the impact of gate down time. The available supply of capacity during peak hours is reduced by the number of trolley crossings per hour. At the present time, approximately eight trolleys cross these arterials in the a.m. and p.m. peak hours. The accumulation of gate down times during either a.m. or p.m. peak hours equals approximately seven minutes per hour. During this down time period all traffic operations along the east-west arterials in the study area are restricted, thus reducing available capacity. Over the course of typical peak hour gate down time, operations represent a reduction in available capacity of approximately 12 percent.

~~It is important to recognize that The Metropolitan Transit Development Board (MTDB) anticipates the installation installed of electronic trolley vehicle tagging devices to which would reduce gate down time at all at-grade crossings in the City of Chula Vista by September 1990. This reduction in gate down time would result resulted in a savings of approximately 30 seconds per trolley crossing (for trolleys which stop at near-side stations in advance of the crossing gates) or 2 minutes of additional arterial and/or intersection capacity (per hour) on the street system. Thus, this new device would restore restored approximately three percent capacity (or a total reduction of approximately nine percent) to each intersection. However, in the near future (one to three years) MTDB anticipates the addition of two more adding trolley vehicles per hour on the south line through Chula Vista. This increase in trolley frequency will negatively impact available capacity and result in an overall reduction in capacity. of approximately 10 percent (assuming all gate crossings are operating with the new electronic delay device). In the long term, frequencies could be increased further, resulting in an additional loss of available capacity. However, MTDB does not currently plan to implement additional trolley service beyond the 10 vehicles per hour which will be operating in the near future.~~

As described in a letter of correspondence from Mr. Harold Rosenberg, City Traffic Engineer, dated November 16, 1990 to Urban System Associates, Inc. (see Appendix G), MTDB has informed the City of Chula Vista that they intend to increase the frequency of trains to eight per hour for each direction. Thus, in the future there would be 16 periods when the gates would be down and stopping traffic on "E," "F," "H," and "J" streets. In other words, a train would be crossing these east/west arterials approximately every three minutes, restricting the movement of traffic for approximately 30 seconds per trolley crossing. This

delay figure indicates that trolley operations will impact these arterials by reducing the amount of available capacity as calculated below:

- 16 Trolley Crossing X 30 Seconds/Crossing = 480 Seconds of Lost Capacity

$$\frac{\text{Total Available Seconds of Capacity per Hour (3600 seconds)}}{\text{Total Seconds of Lost Capacity per Hour (480 seconds)}}$$

$$= 13.3 \text{ Percent Reduction of Available Capacity}$$

However, with the trolley gate down, the traffic signals at the "E" Street/I-5 ramp intersections operate with flashing red signals. After stopping, traffic can legally move through the intersection if the vehicle's path is clear. For example, the eastbound to northbound left turn movement at the I-5 northbound on-ramp can be made on the flashing red signal. Also, the northbound to westbound left turn from the northbound off-ramp can be made after stopping. Therefore, the effect of the trolley gate operation is a reduction of less than 13.3 percent of intersection capacity. However, it is recommended that this minimal amount of extra capacity not be considered when reviewing trolley impacts.

To further clarify this issue, JHK was directed by the City of Chula Vista to analyze the northbound ramp intersection at the interchange of Interstate 5 at "E" Street using the "Operation Analysis" method described in the 1985 Highway Capacity Manual (HCM). This method allowed JHK to more accurately predict existing and future levels-of-service based on average delay per vehicle in seconds. A summary of the results of this additional analysis are detailed in the section titled "Highway Capacity Manual (HCM) Analysis."

~~Table 3-10 lists the existing levels of service at the intersections in the study area. The intersections of "E" Street at the I-5 southbound ramp and "H" Street at the I-5 southbound ramp operate at level of service C during the p.m. peak period, while the remaining intersections operate at level of service A or B during this time period.~~

#### Roadway Segment Capacity Analysis

The following conclusions were drawn from the analysis of existing roadway segment operating conditions. A number of roadway segments in the study area currently operate at levels below the City of Chula Vista operating standards of LOS C. These segments are as follows:

- "E" Street between 5th Avenue and I-5
- "F" Street between 5th Avenue and Broadway
- "H" Street between 5th Avenue and I-5

To more clearly define traffic operations and performance, the following analysis of study area signalized intersections is provided.

### **Signalized Intersections Capacity Analysis**

Table 3-10 lists the existing levels of service at the intersections in the study area. All intersections operate at LOS A during the a.m. peak period, except the intersection of Broadway/"E" Street which operates at LOS B. During the p.m. peak period, all study area intersections operate at LOS C or better, except the intersection of Broadway/"H" Street which operates at LOS D.

### **Anticipated Circulation Improvements**

Anticipated improvements to the transportation network include construction of Marina Parkway, reconfiguration of the I-5 southbound ramps at "E" Street and completion of State Route (SR) 54 north of "E" Street. Marina Parkway and the I-5 southbound ramp reconfiguration are shown on Figure 3-XVI.

#### **Marina Parkway**

Marina Parkway is an extension of "E" Street west of Bay Boulevard through the project site. It will angle to the south and align with existing Marina Parkway near "H" Street. Major access points to the project site will be located:

1. Along the westerly extension of "E" Street/Marina Parkway for the office and residential uses on the north side of the street and the retail and recreational uses to the south (referred to in this report as the "major east access"),
2. At the entrance to the luxury and resort hotels on the west side of the site,
3. At the entrance to the residential units at "F" Street, and
4. Along "F" Street between Marina Parkway and Bay Boulevard.

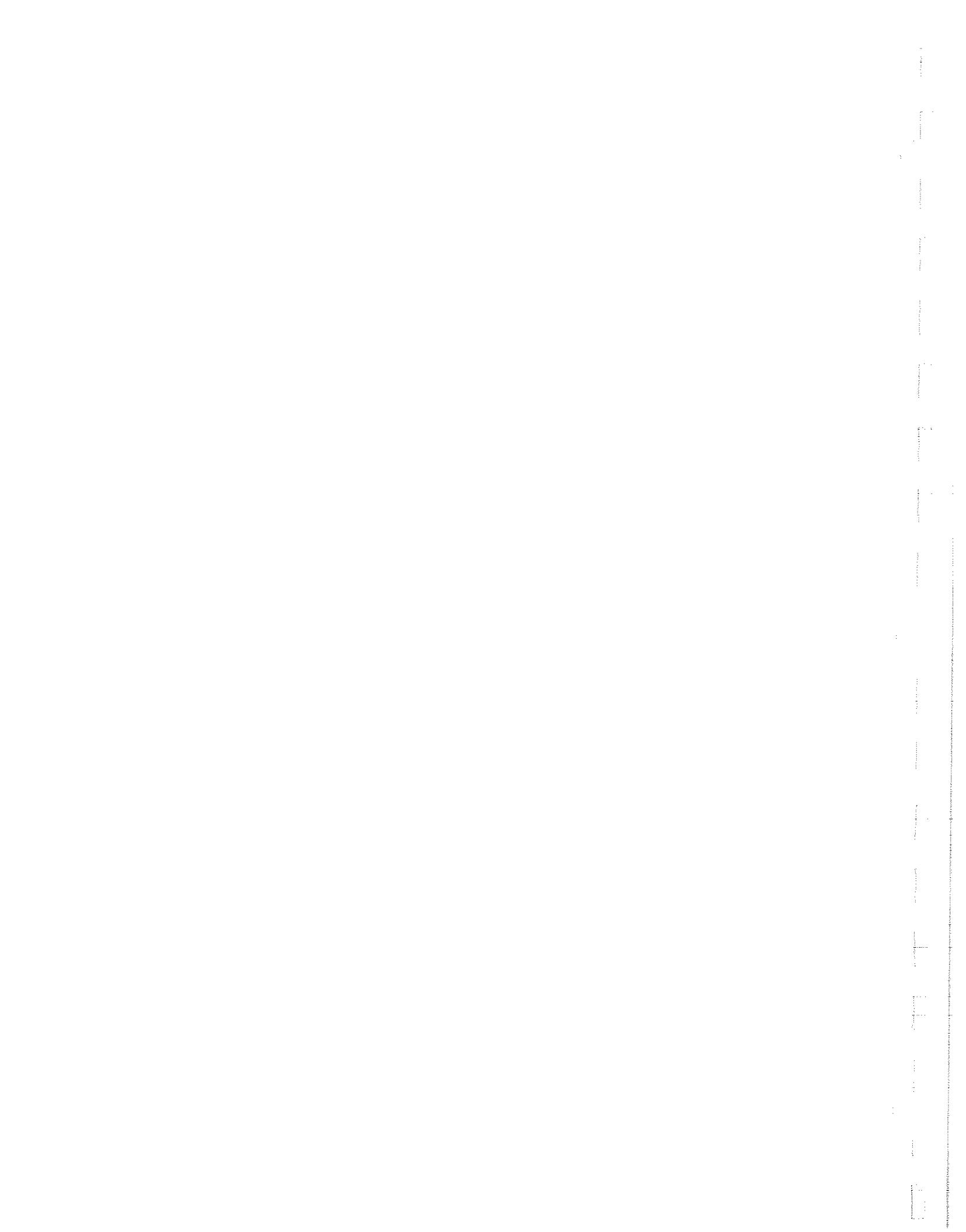
#### **State Route 54**

State Route (SR) 54 is currently under construction and will provide a major link between I-5 and I-805. "E" Street currently carries a relatively high amount of through traffic between I-5 and I-805, and the completion of SR 54 is expected to reduce the amount of through traffic on "E" Street by approximately 15 percent due to anticipated diversion.

#### **"E" Street/I-5 Interchange**

##### **I-5 Southbound Ramps/"E" Street**

Caltrans is reconstructing the southbound ramps on I-5 at "E" Street. The southbound off-ramp is being realigned to end at the existing intersection of "E" Street and Bay Boulevard. The existing southbound on-ramp will remain in place, and an additional loop ramp from the westbound "E" Street to southbound I-5 would be added in the northwest quadrant of the



**Table 3-10**  
**EXISTING LEVELS OF SERVICE**

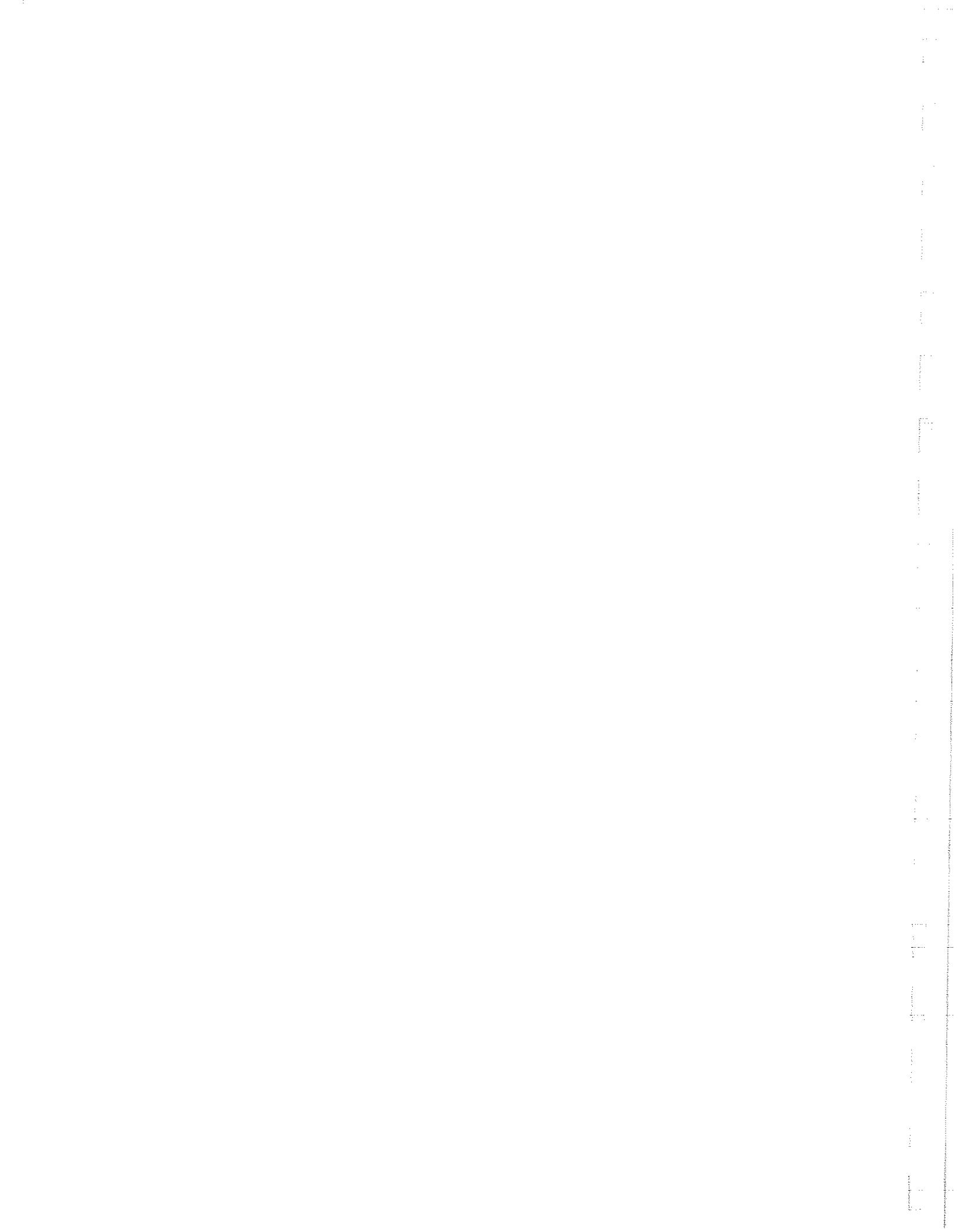
**ORIGINAL STUDY AREA INTERSECTIONS - YEAR 1989 CONDITIONS**

| <u>INTERSECTION</u> |                         | <u>AM PEAK</u> |            | <u>PM PEAK</u> |            |
|---------------------|-------------------------|----------------|------------|----------------|------------|
| <u>N/S Street</u>   | <u>E/W Street</u>       | <u>ICU</u>     | <u>LOS</u> | <u>ICU</u>     | <u>LOS</u> |
| I-5 SB Ramp         | "E" Street              | 0.34           | A          | 0.74           | C          |
| I-5 NB Ramp         | "E" Street              | 0.39           | A          | 0.63           | B          |
| I-5 SB Ramp         | "H" Street              | 0.35           | A          | 0.71           | C          |
| I-5 NB Ramp         | "H" Street              | 0.39           | A          | 0.65           | B          |
| Bay Boulevard       | "H" Street              | 0.47           | A          | 0.51           | A          |
| I-5 SB Ramp         | "J" Street              | 0.34           | A          | 0.63           | B          |
| I-5 NB Ramp         | "J" Street              | 0.31           | A          | 0.43           | A          |
| Bay Boulevard       | "J" Street/Marina Pkwy. | 0.45           | A          | 0.52           | A          |

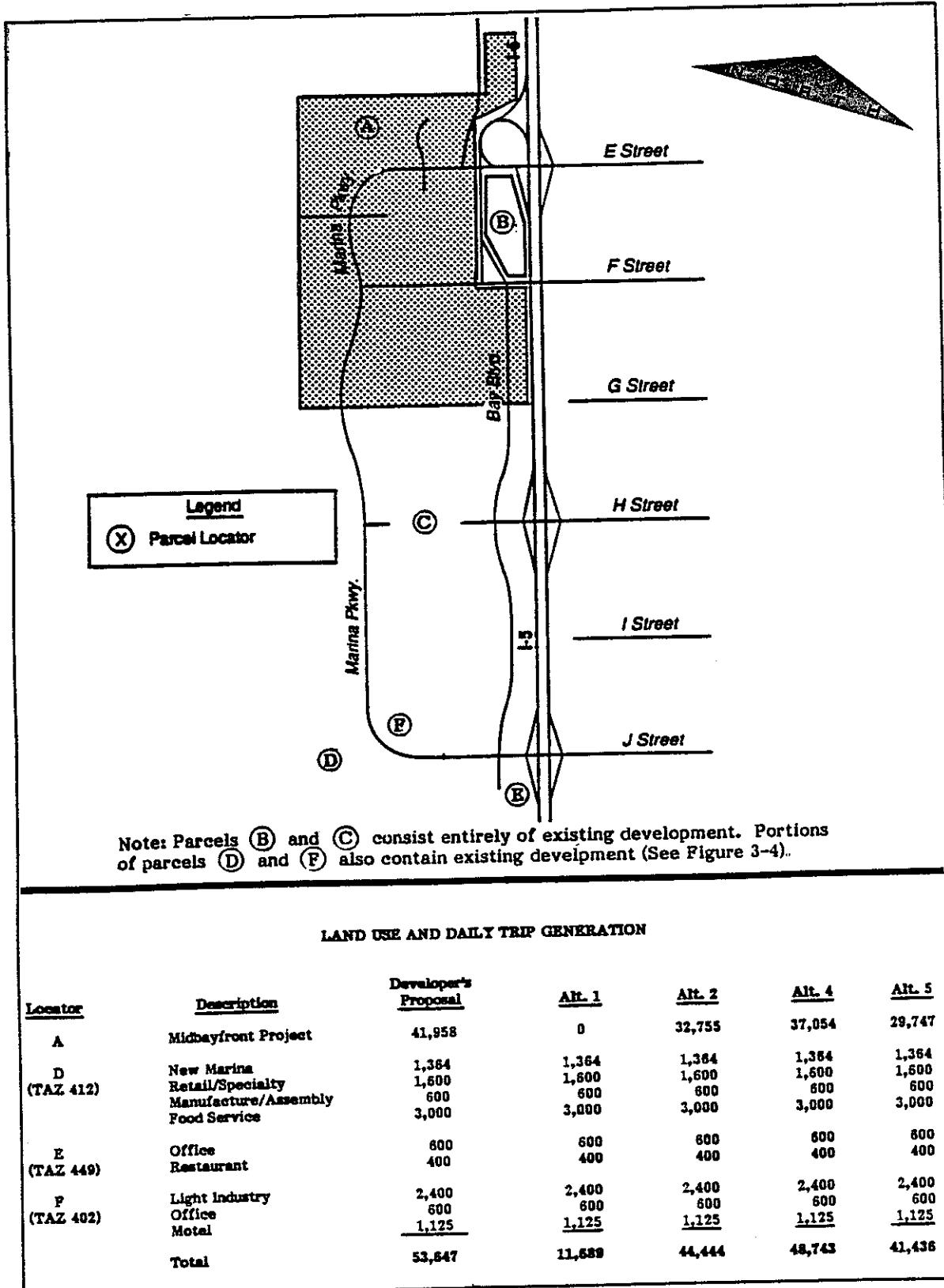
**NEW EXPANDED STUDY AREA INTERSECTIONS - YEAR 1990 CONDITIONS**

| <u>INTERSECTION</u> |                   | <u>AM PEAK</u> |            | <u>PM PEAK</u> |            |
|---------------------|-------------------|----------------|------------|----------------|------------|
| <u>N/S Street</u>   | <u>E/W Street</u> | <u>ICU</u>     | <u>LOS</u> | <u>ICU</u>     | <u>LOS</u> |
| Woodlawn Avenue     | "E" Street        | 0.52           | A          | 0.76           | A          |
| Broadway            | "E" Street        | 0.62           | B          | 0.79           | C          |
| Woodlawn Avenue     | "F" Street        | 0.24           | A          | 0.39           | A          |
| Broadway            | "F" Street        | 0.37           | A          | 0.69           | B          |
| Broadway            | "H" Street        | 0.42           | A          | 0.81           | D          |

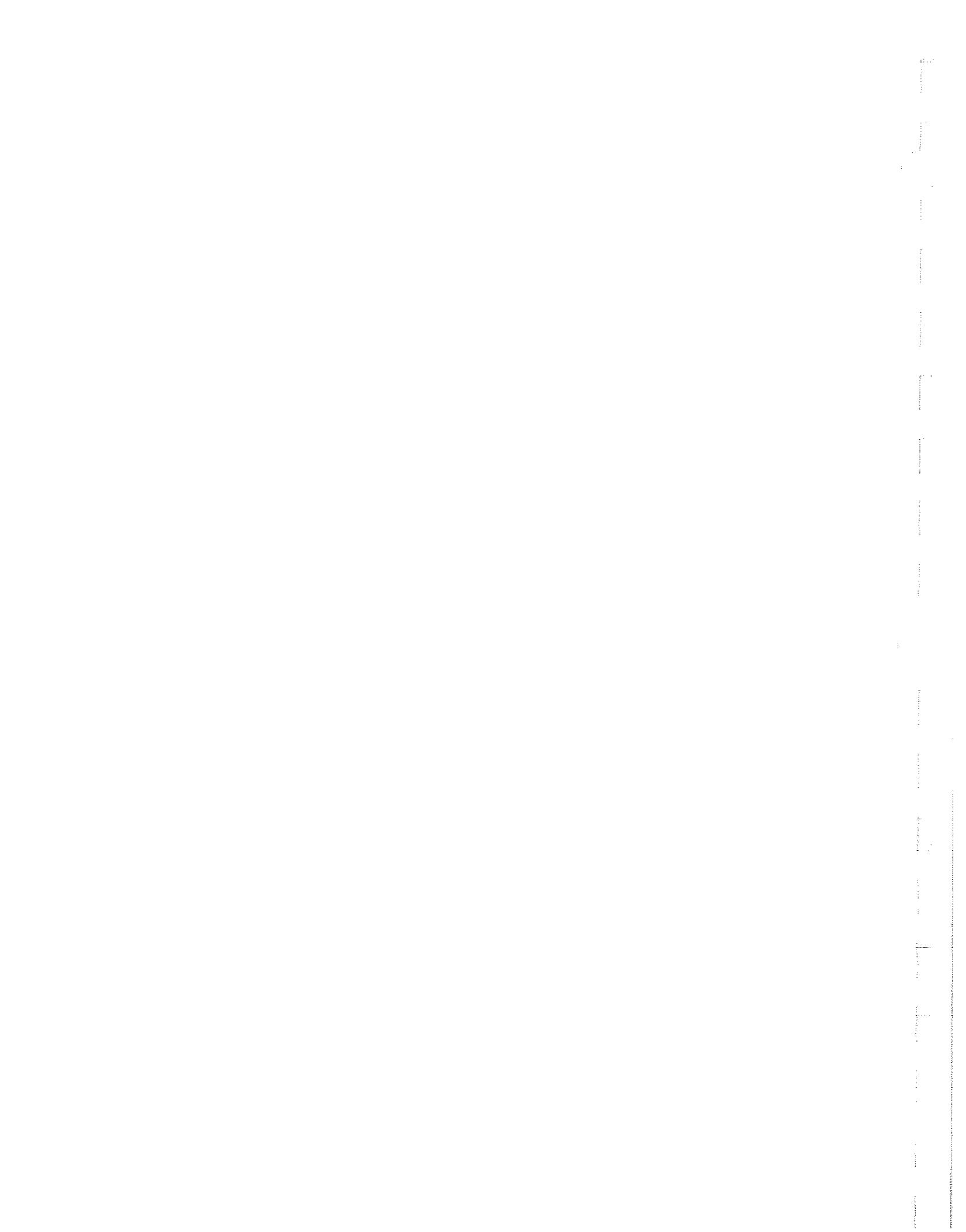
Source: JHK & Associates



C P R E S U M  
M I T T A L # 8



Proposed Bayfront Land Use  
and Daily Trip Generation



interchange. This reconfiguration will eliminate left turns at the existing southbound on-ramp from westbound "E" Street.

### **Developer Proposed Circulation Improvements**

#### **I-5 Northbound On-Ramps / "E" Street**

The Developer has proposed to provide the following improvements at this location:

- Restriping of the overpass structure to provide double left-turn lanes from eastbound "E" Street to northbound I-5
- Construction of an exclusive right-turn only lane for westbound "E" Street to northbound I-5 on-ramp

It is important to note that Caltrans has not approved the restriping of the Interstate 5 overcrossing at "E" Street. The primary reason that approval has not been granted by Caltrans is that sub-standard lane widths are included in the proposed restriping plan. Since this bridge overcrossing is under the jurisdiction of Caltrans, their approval of any modification to the traffic flow plan at this interchange is required. In the impact analysis the proposed project and each of the alternatives are evaluated both with and without the proposed restriping.

### **Planned Improvements**

Planned improvements to the transportation network include construction of Marina Parkway, reconfiguration/reconstruction of the I-5 northbound on-ramp and southbound on-and off ramps at "E" Street and completion of State Route (SR) 54 north of "E" Street. Marina Parkway and the I-5 southbound ramp reconfiguration are illustrated in Figure 3-XVI.

### **Impacts**

The impact analysis was based on assumptions summarized on the next page. The analysis includes the projected trip generation, trip distribution, volume-to-capacity ratios, and intersection capacity utilization.

The trip generation and distribution was analyzed for the proposed project and for other planned developments in the study area. In addition to the developer's proposed uses, four alternatives were analyzed. Alternative 1 is a no-build alternative, and Alternative 2 is the existing Land Use Element of the Chula Vista Local Coastal Program (LCP). Alternatives 4 and 5 represent reductions in land-use intensity from the developer's proposal. Another alternative, Alternative 3, is not significantly different from Alternative 4 in regards to traffic, so it was not included separately in this analysis. The analysis of the proposed project and all of the alternatives included the assumption that the **Planned Anticipated Circulation Improvements**, listed above, were in place.

The determination of impact level is based on the City's Threshold Standards, as well as on standards generally applied throughout the U.S. On the average, national standards consider anything below a level-of-service (LOS) D at signalized arterial intersections a significant impact. The City's Threshold Standards state that traffic operations at arterial signalized intersections which exceed a two-hour duration of level-of-service D would be unacceptable. Since it is impossible to accurately predict the duration of future levels-of-service, this planning analysis of future impacts strived to achieve LOS C operations or better at all study area signalized intersections as directed by the City of Chula Vista. By following this guideline of providing mitigation measures to achieve LOS C operations at all arterial intersections based on future build-out traffic forecasts, the City is confident that future levels-of-service will be in conformance with the requirements of the City's Threshold Standards. ~~the assumption was used in this analysis that LOS D at arterial signalized intersections would be of a duration longer than two hours under future buildout conditions.~~ Thus, levels-of-service D, E, or F are considered significant impacts ~~at signalized intersections of City arterial streets~~.

At the present time, the City's Threshold Standards exclude signalized intersections located at freeway interchange ramps. However, the City's Growth Management Oversight Committee recommended that ~~LOS~~ D level-of-service criteria be applied to ramp signals when a causal impact relationship can be shown and that these locations be included in the revision of Threshold Standards conformance for future development projects. Thus, the I-5 ramp ~~intersections~~ should be limited to a D level-of-service for no more than two hours (same as required for City signalized intersections). However, since it is impossible to predict the duration of future level-of-service and the fact that higher volume levels and lower levels-of-service typically are anticipated at freeway ramp intersections, JHK has developed the following guideline for this analysis. For this planning analysis of future levels-of-service, LOS D operations at the freeway ramp intersections were considered acceptable while levels of E and F are considered significant impacts.

### **Summary of Critical Assumptions Used in the Traffic Analysis for the Original Draft EIR**

A series of important issues were identified prior to the initiation of the traffic analysis. The following discusses these issues and defines the critical assumptions which formed the basis for the analysis.

Twenty-four hour volume counts taken by Chula Vista Public Works Department in June 1989 indicate that the p.m. peak hour on bayfront area roads occurs from 3 p.m. to 4 p.m. This is primarily due to the shift change characteristics at Rohr Industries, the largest employer in the bayfront. Furthermore, ramp volumes may also peak at this time, although the ramp volumes are also affected by uses east of I-5 that typically have later peak hours. It is important to note that the existing turning movement counts on "E" Street were taken during the normal peak period between 4 p.m. and 6 p.m., and that the peak hour analysis for the proposed project was conducted for a peak hour between 4 p.m. and 6 p.m. The effect of the proposed project will be an extended peak period as volumes will be increased during the current 3 p.m. to 4 p.m. peak hour, and most of the proposed uses will peak during the typical 4 p.m. to 6 p.m. period. If the uses currently in place at Rohr Industries are altered or operating conditions are modified such that the peak is shifted to the typical

peak period, higher volumes and, subsequently, worse operation conditions would occur than what is projected. For this analysis it was assumed that the current operating characteristics at the Rohr Facility will not change in the future, and most traffic activity associated with the ~~existing~~ Rohr complex will continue to occur during the typical off-peak period (3:00 p.m. to 4:00 p.m.).

Additional assumptions were made for the ICU calculations at the intersection of "E" Street and Bay Boulevard/I-5 southbound off-ramp and the intersection of "E" Street and the I-5 northbound ramps. The total volume for the northbound right-turn movement at the intersection of "E" Street/Marina Parkway and Bay Boulevard/I-5 southbound ramp was reduced by the amount of the westbound left-turn volume on "E" Street bound for Bay Boulevard. This is possible because of the ability to overlap the northbound right-turn movement with the westbound left-turn phase, thus improving the overall efficiency of this signalized intersection.

~~At the intersection of "E" Street and the I-5 northbound ramps, the westbound right turn volume was reduced by one half of the total northbound approach volume. This assumption is dependent on two requirements. First, the northbound off ramp through movement should be prohibited and, if possible, prevented by a physical barrier. Second, the westbound right turn lane must be long enough so that queues from the westbound through lanes do not block vehicles trying to enter the right turn lane.~~

### Trip Generation

#### Proposed Project

Figure 3-XVI ~~also~~ summarizes the land use and trip generation data for the proposed project. Analysis for the developer's proposed project includes trips generated by all other bayfront developments. The proposed project, Parcel A on Figure 3-XVI, is expected to generate approximately 41,958 trips, which is 78 percent of all trips (53,647 ADT) generated by other new developments in the bayfront area.

It is important to recognize that certain land uses may produce a greater number of daily trips when compared to other uses. However, when comparing the trip generation during the a.m. or p.m. peak hours the relative relationship may not be the same. Thus, the traffic impact analysis is typically based on peak hour volumes at signalized intersections. The bayfront Traffic Impact Analysis Report (October 1989) as well as the EIR document followed this methodology and each alternative land use plan is analyzed in a similar manner so that the impact of the trips produced during the peak periods could be compared accurately.

#### Alternative 1 - No-Project

For this alternative, it was assumed that no development would occur on the project site. Analysis of this alternative included the land uses that were expected to occur in the bayfront area regardless of what ultimately would be developed on the project site. Specifically, this alternative included the developments expected to occur in Traffic Analysis

Zones (TAZs) 402, 412, and 449 from the SANDAG forecasting model. The trip generation and land use summary for these developments are identified in Figure 3-XVI. Generally, these developments were considered as occurring under each of the five land use alternatives, with only slight modifications. Under this No-Build Alternative, approximately 11,689 daily trips are expected to occur.

#### Alternative 2 - Existing LCP

This land use alternative, as presented in the Land Use Element of the LCP, includes residential, office, retail, park and public/quasi-public land uses. Figure 3-XVI provides a summary of the land use and trip generation data for this alternative. As compared to the proposed project, this alternative provides a reduced density of residential and commercial visitor uses and an increased density of office uses. The area included in this analysis for the LCP consisted of the project site. Also, traffic from the SANDAG TAZs 402, 412, and 449 was added to the LCP alternative as "Other Planned bayfront" trips. This land use alternative is expected to generate a total of 44,444 daily trips, which is 17 percent fewer trips than is generated by the proposed project (53,647 ADT).

#### Alternative 4 - Reduced Density 1A

Figure 3-XVI summarizes the land use and trip generation data for this reduced density alternative. This land use alternative includes a lower density of residential and commercial visitor (hotel/motel units) land uses as compared with the proposed project. Approximately seven additional acres of parklands would be provided under this alternative. A total of 48,743 daily trips is expected to be generated under this alternative, which is about 9 percent fewer trips than would be generated by the proposed project (53,647 ADT).

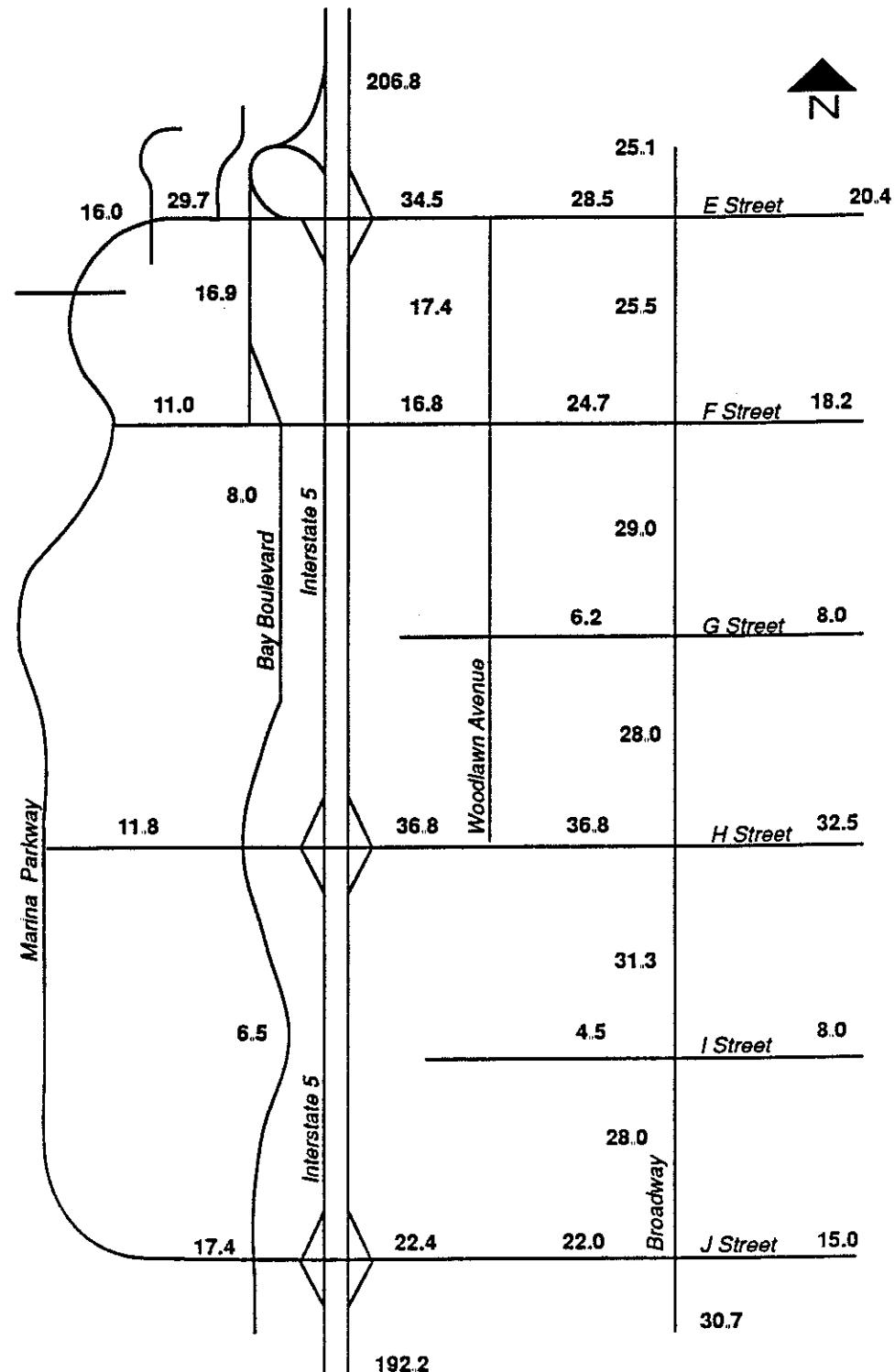
#### Alternative 5 - Reduced Density 2

This land use alternative includes changes in the densities of the same types of land uses as under the previous reduced density alternative (1A) but with reductions of greater magnitude. Specifically, there are significant decreases in the densities of the residential and commercial visitor land uses. Figure 3-XVI provides a summary of the estimates of land use and trip generation data for this alternative. As can be seen from Figure 3-XVI, about 41,436 daily trips are expected to occur, which represents a 23 percent reduction in trips as compared with the proposed project (53,647 ADT).

#### **Trip Distribution**

The projected distribution of ADTs resulting from adding all new bayfront traffic to existing traffic is shown in Figure 3-XVII for the developer's proposal. Figures 3-XVIII through 3-XXI show the projected distribution of ADTs for Alternatives 1, 2, 4 and 5. These figures depict build-out conditions at year 2000.

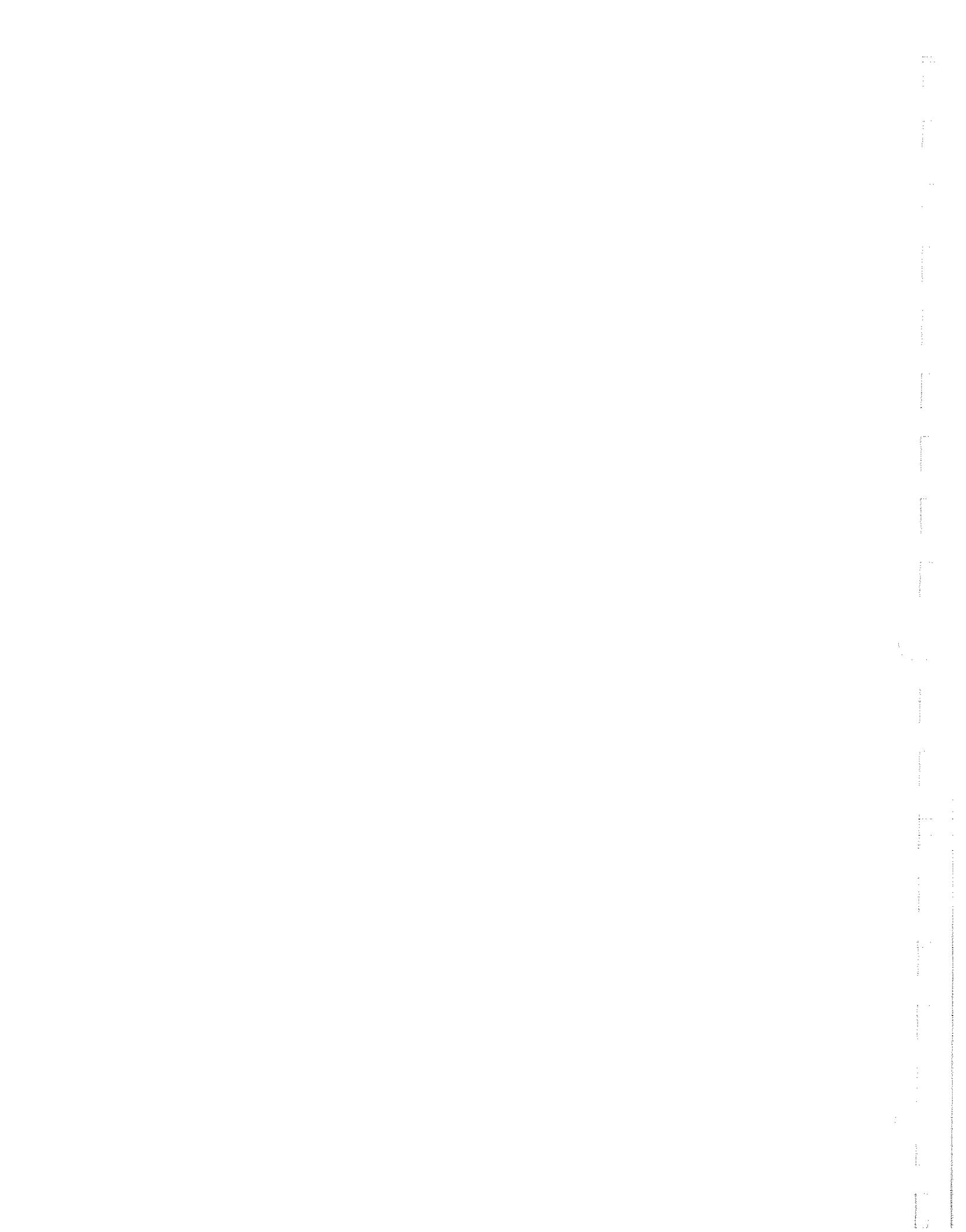
Before adding new trips to the network, existing volumes on "E" Street were reduced by 15 percent due to the expected completion of State Route 54 at project buildout. Existing volumes on "H" Street and "J" Street were reduced by five percent. In addition, a two-

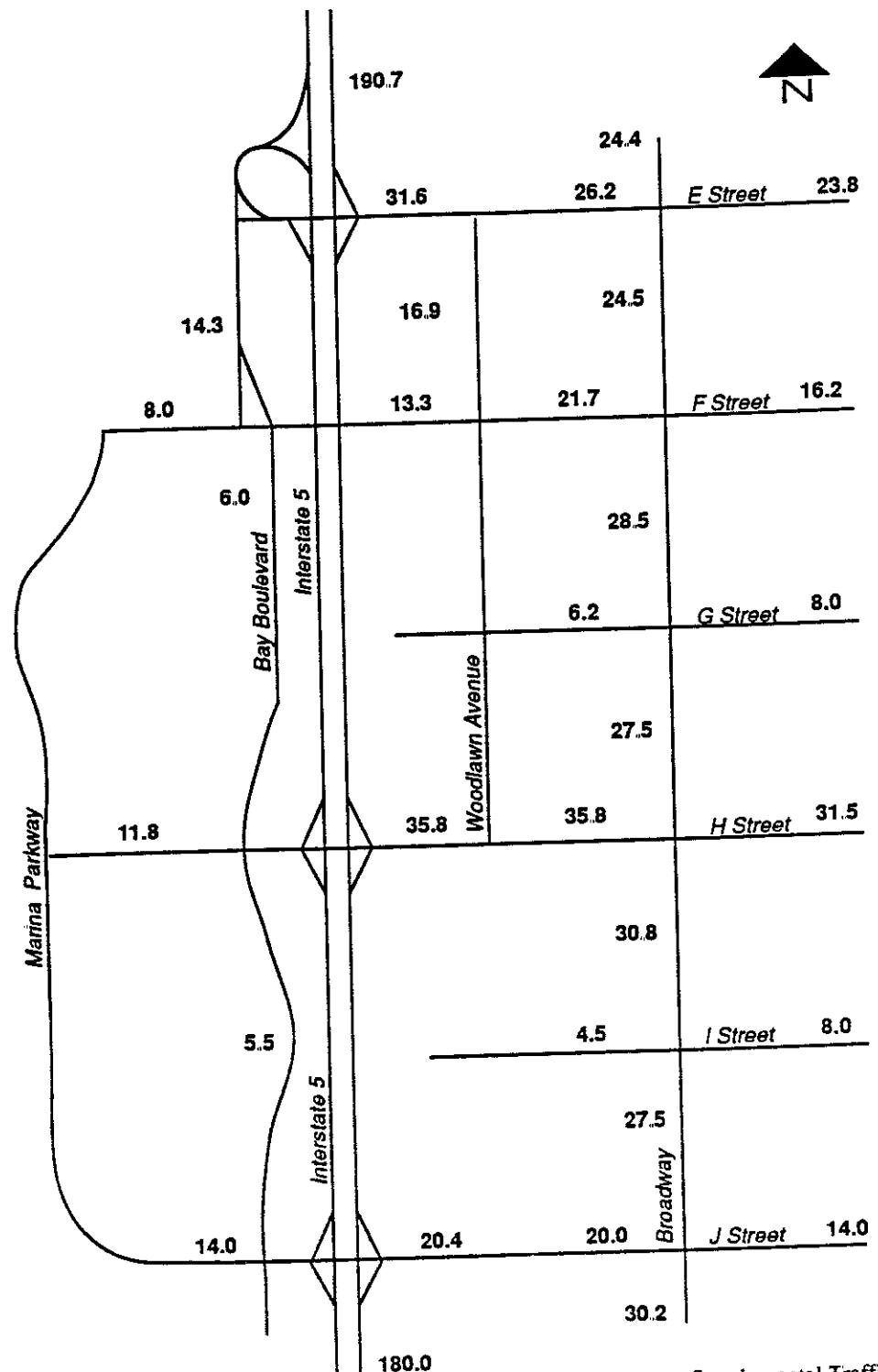


Supplemental Traffic Data Analysis  
JHK & Associates

**Figure 3-XVII**

**PROJECTED ADT (IN THOUSANDS) AT BAYFRONT BUILDOUT  
PROPOSED PROJECT  
YEAR 2000**

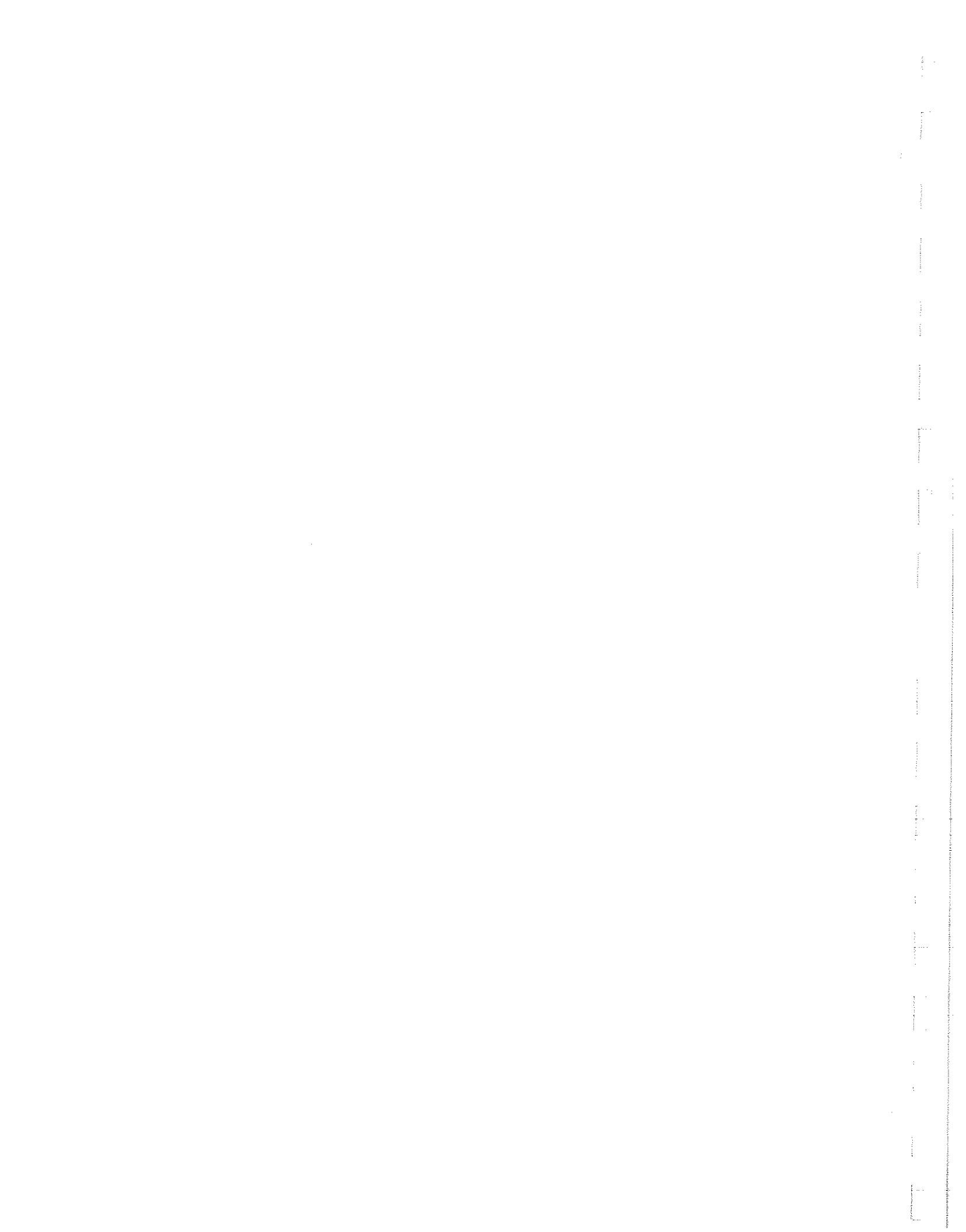


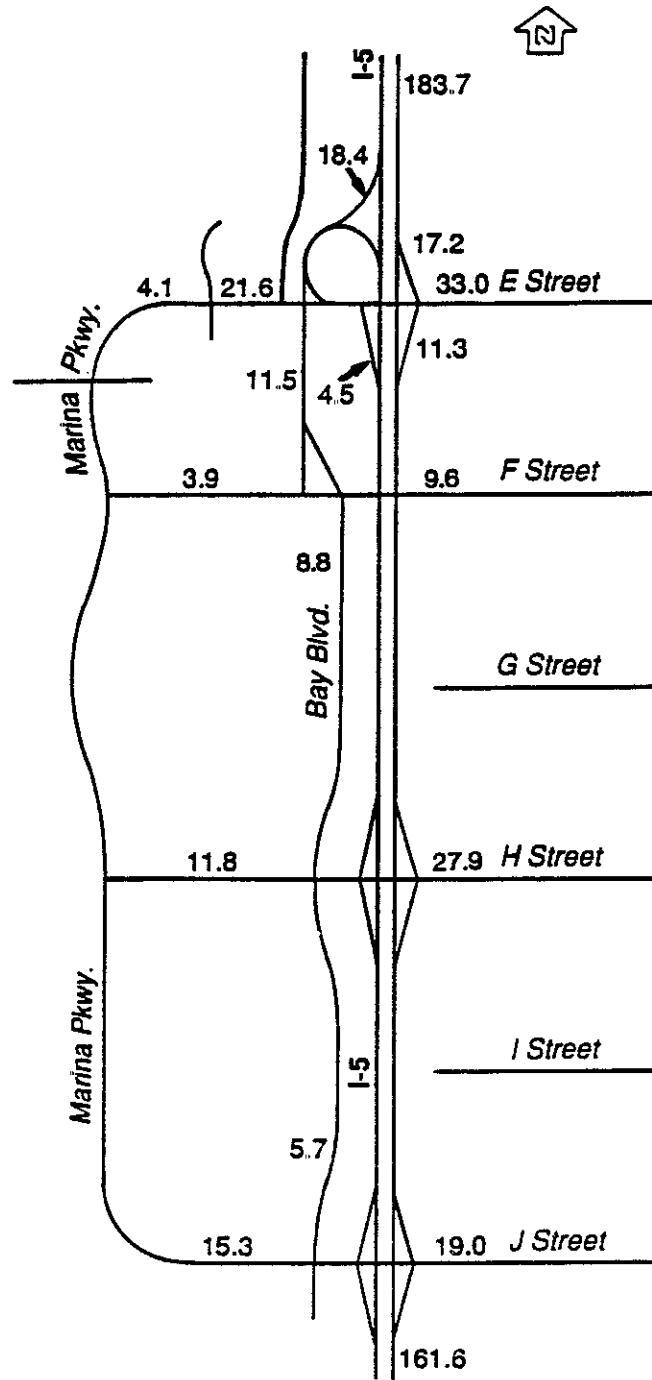


Supplemental Traffic Data Analysis  
JHK & Associates

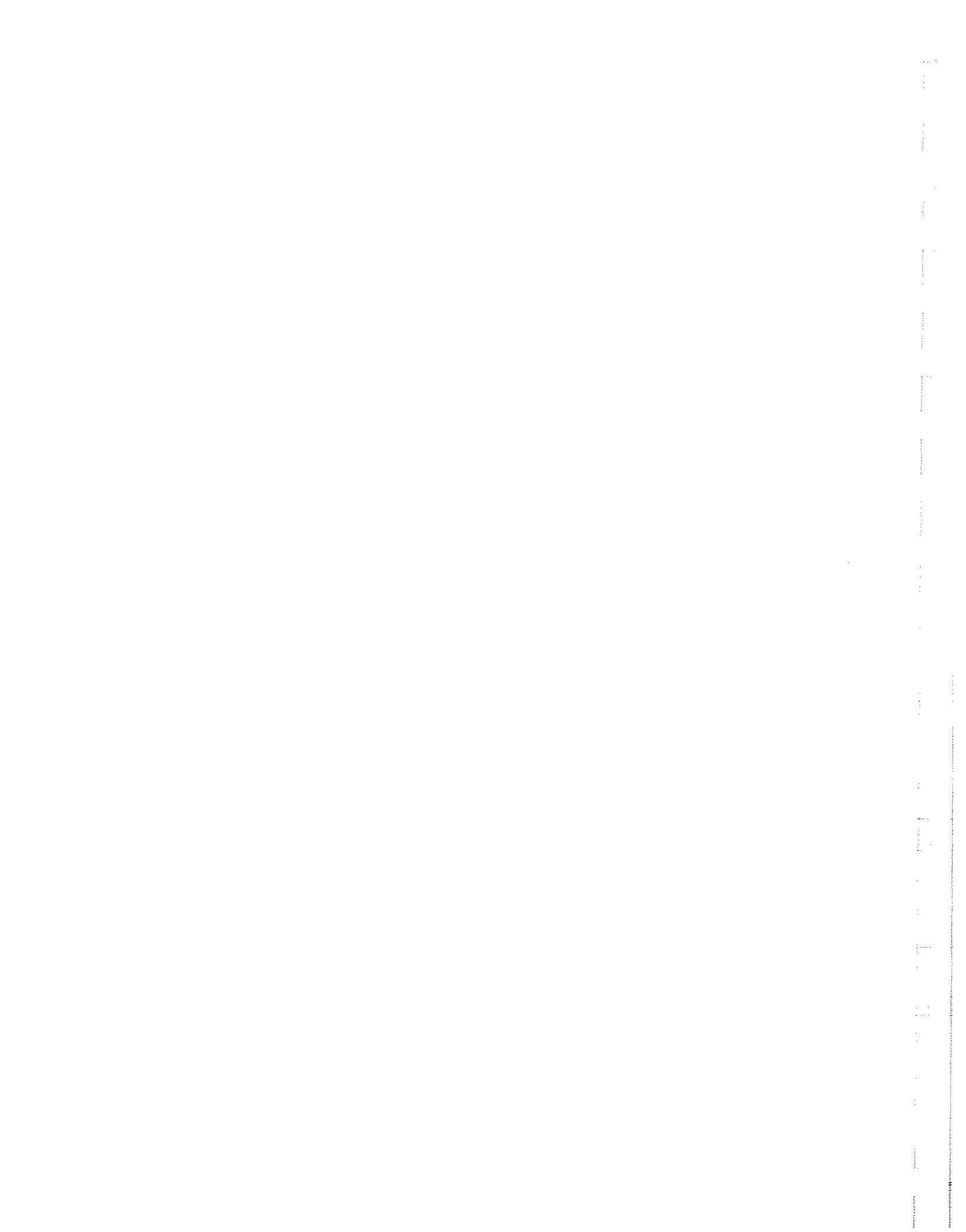
**Figure 3-XVIII**

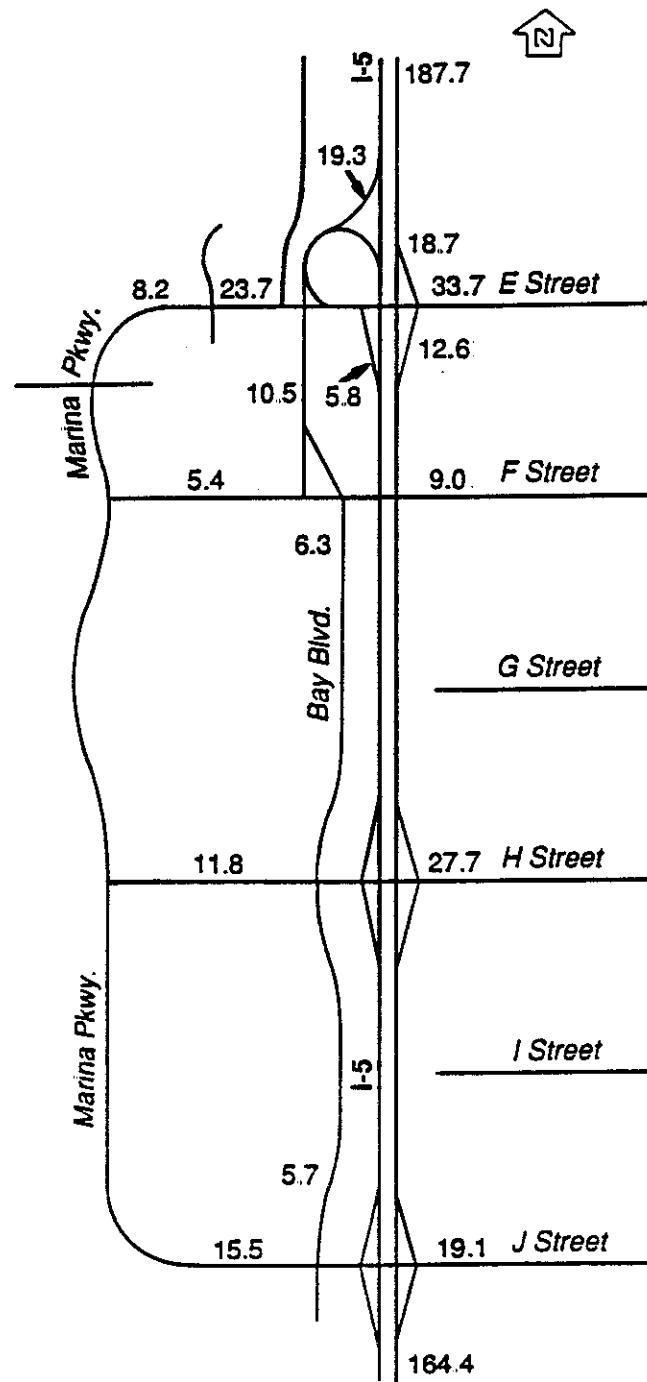
**PROJECTED ADT (IN THOUSANDS) AT BAYFRONT BUILDOUT  
NO BUILD/ALTERNATIVE 1  
YEAR 2000**



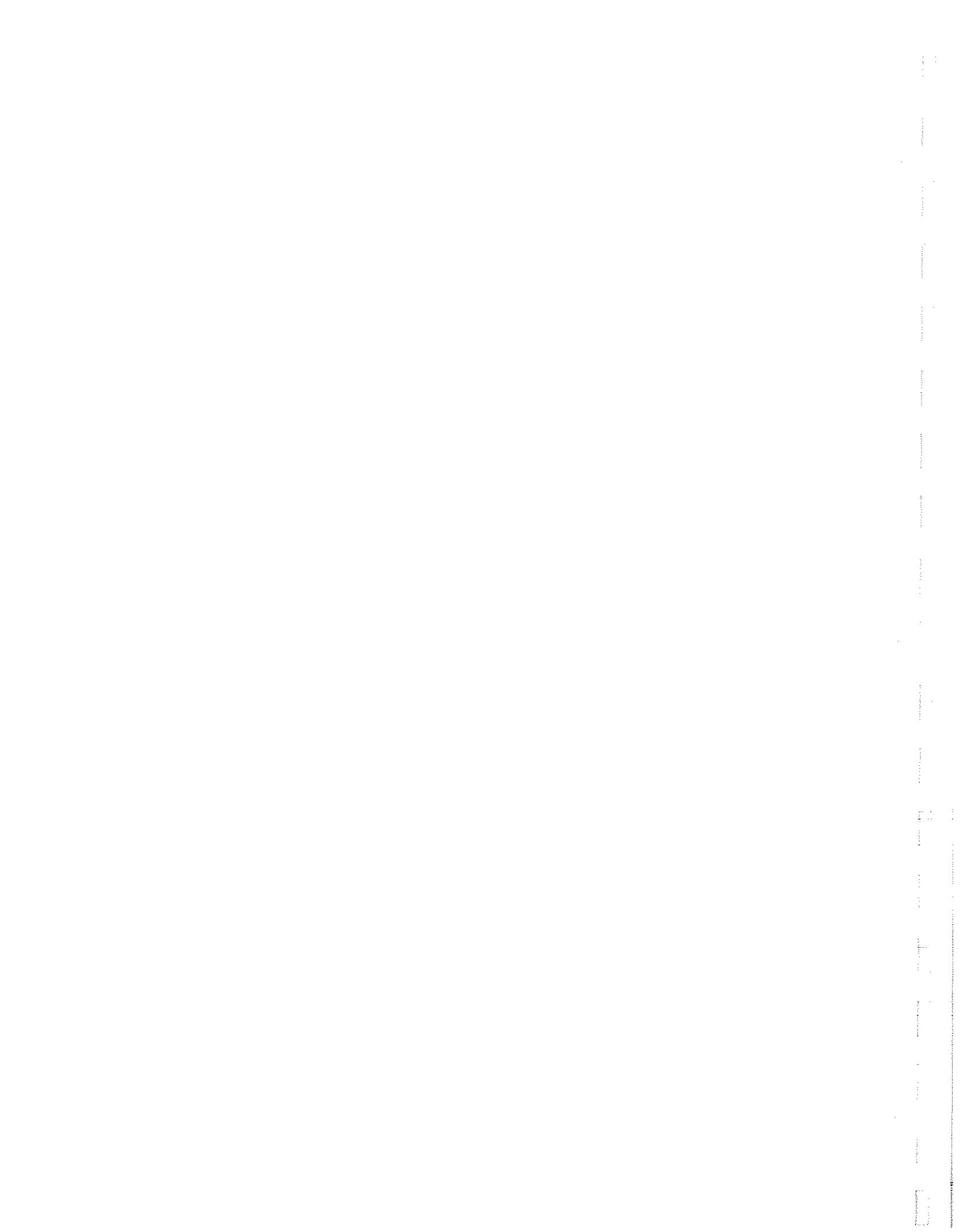


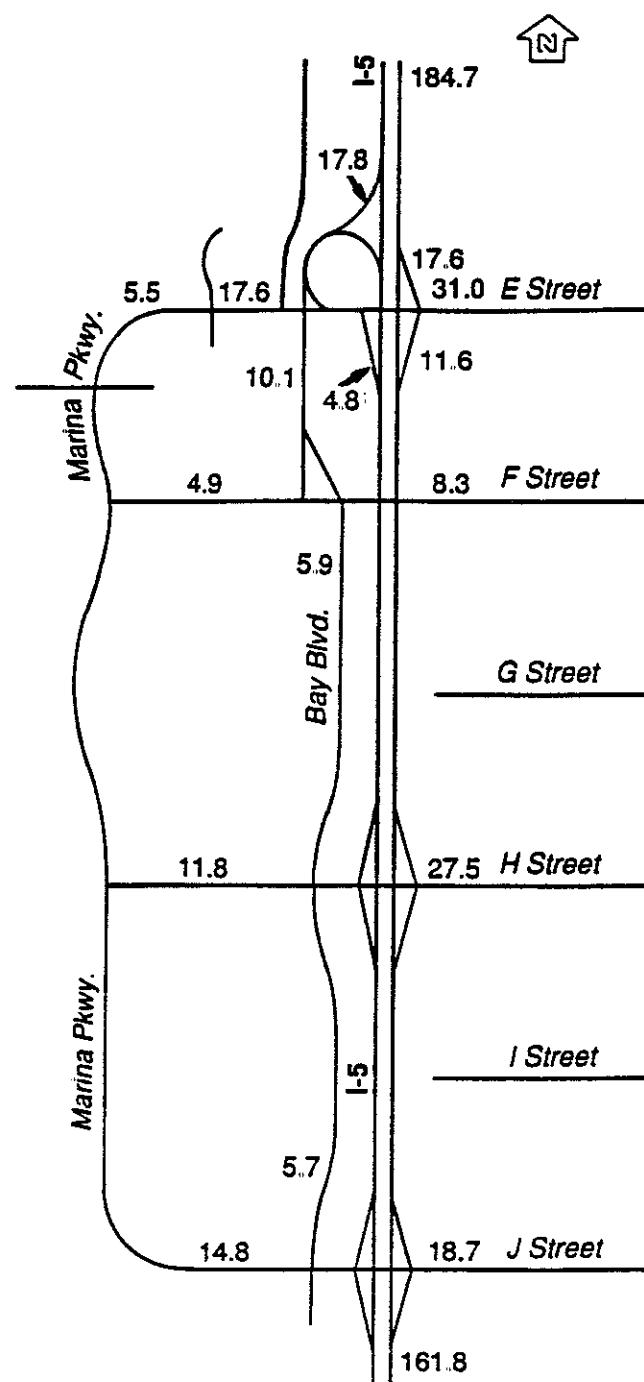
**Figure 3-XIX**  
**2000 Projected ADT (1000's) at Bayfront Buildout**  
**Alternative 2**



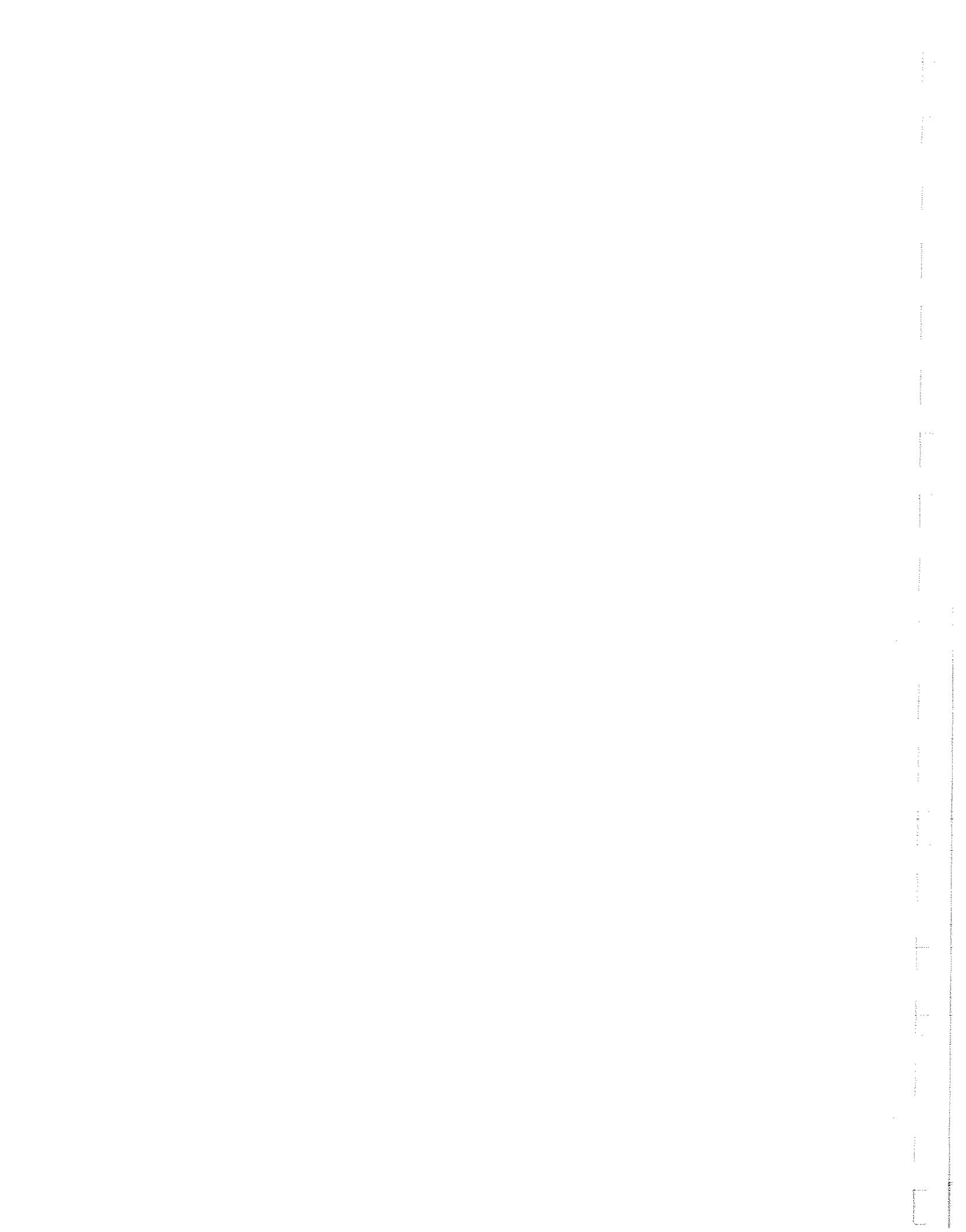


**Figure 3-XX**  
**2000 Projected ADT (1000's) at Bayfront Buildout**  
**Alternative 4**





**Figure 3-XXI**  
**2000 Projected ADT (1000's) at Bayfront Buildout**  
**Alternative 5**



percent per year growth rate over a 10-year build-out period for the bayfront area was added to the exiting volumes on non-bayfront streets to account for growth in areas outside the bayfront.

### **Volume-to-Capacity Ratios Analysis of Future Conditions**

Figure 3-XXII shows the street classifications for the study area assumed for this EIR analysis. Marina Parkway would be upgraded to a six-lane major street between the major east site access point and I-5. This street is restricted at the I-5 bridge overcrossing, so only two lanes in each direction would be possible, although it has been proposed by the applicant that "E" Street be restriped over the bridge to allow for a second left-turn lane on eastbound "E" Street to access northbound I-5. The double left-turn lanes at this location would be limited to a width of ten feet. Additionally, it has been indicated that sub-standard lane widths may also be required for through lanes on the overcrossing if the "E" Street bridge structure is not widened. Thus, as recommended by the City Traffic Engineer in a letter to Urban Systems Associates dated November 16, 1990 (Appendix G), Caltrans approval of the proposed striping plan/lane alignments on the "E" Street overpass must be secured prior to accepting these proposed geometrics as mitigation for future impacts. The proposed restriping mitigation is, however, tested in the Impacts section. The recommended plan also calls for construction of Marina Parkway as a four-lane collector west and south of the major east access. "E" Street east of I-5 is designated a four-lane major street with special treatment. The capacity was increased on this segment due to the addition of a westbound lane for vehicles turning right and the I-5 northbound on-ramp.

The volume-to-capacity ratios for the volumes projected for the anticipated impact of daily traffic volume forecasts for the proposed project and the alternatives on the recommended circulation system are summarized in the following text below, in Table 3-11, with existing conditions included for comparison. Since the proposed project represented the worst-case volume scenario, the other alternatives were not included in this table.

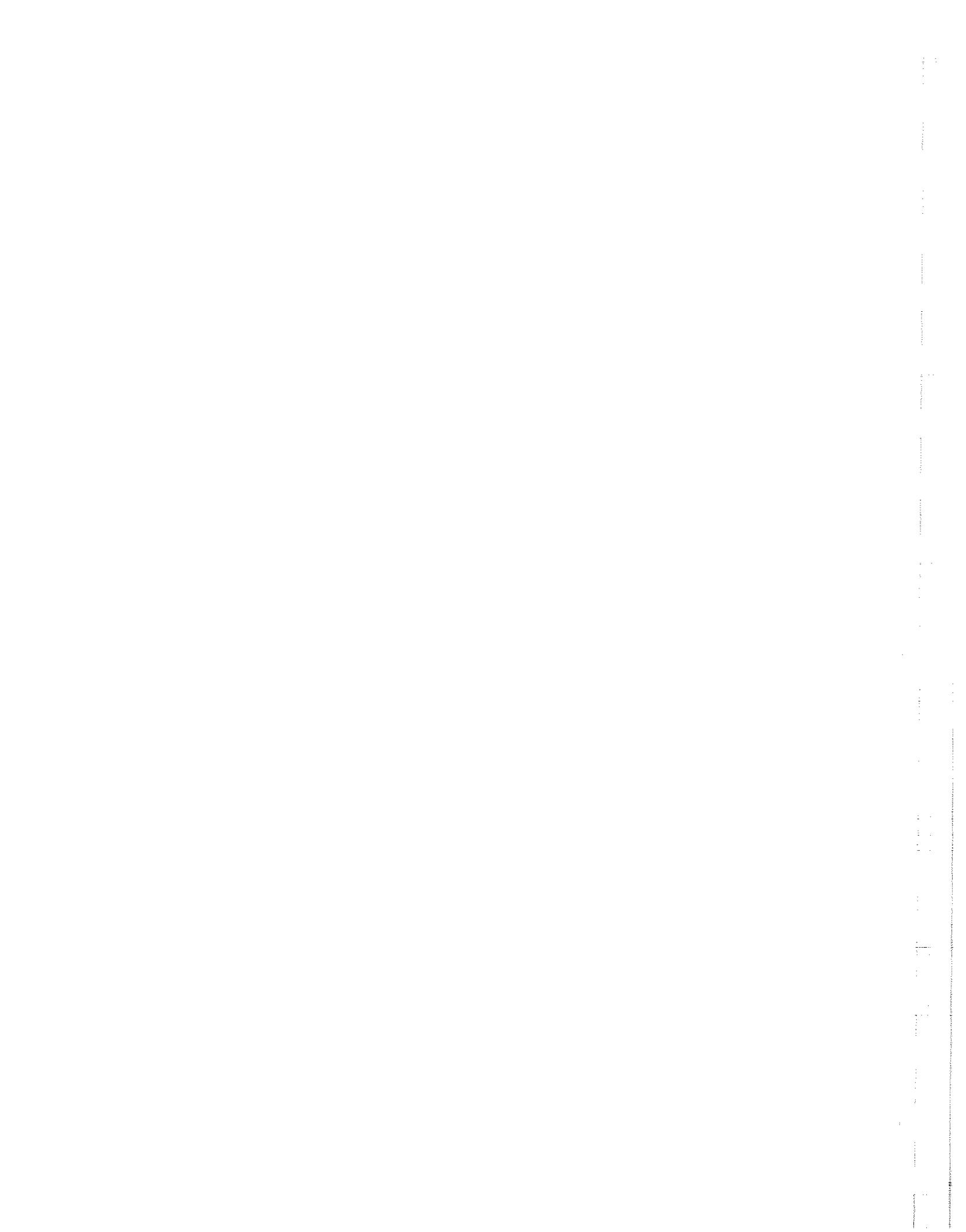
### **Roadway Segment Analysis**

The impact analysis for the No-Project Alternative and the Proposed Project presented below is based on the expanded study area graphically shown on Figure 3-XV-A. The impact analysis for the other alternatives is based on the original study area shown on Figure 3-XV-B.

#### **Alternative 1 - No-Project**

Under Alternative 1, the roadway segments that experience a level-of-service below the City of Chula Vista operating standards of LOS C or better include:

- "F" Street between 5th Avenue and Broadway (LOS F)
- Broadway between "H" and "I" Streets (LOS D)
- Broadway between "J" and "K" Streets (LOS D)
- Bay Boulevard between "E" and "F" Streets (LOS E)



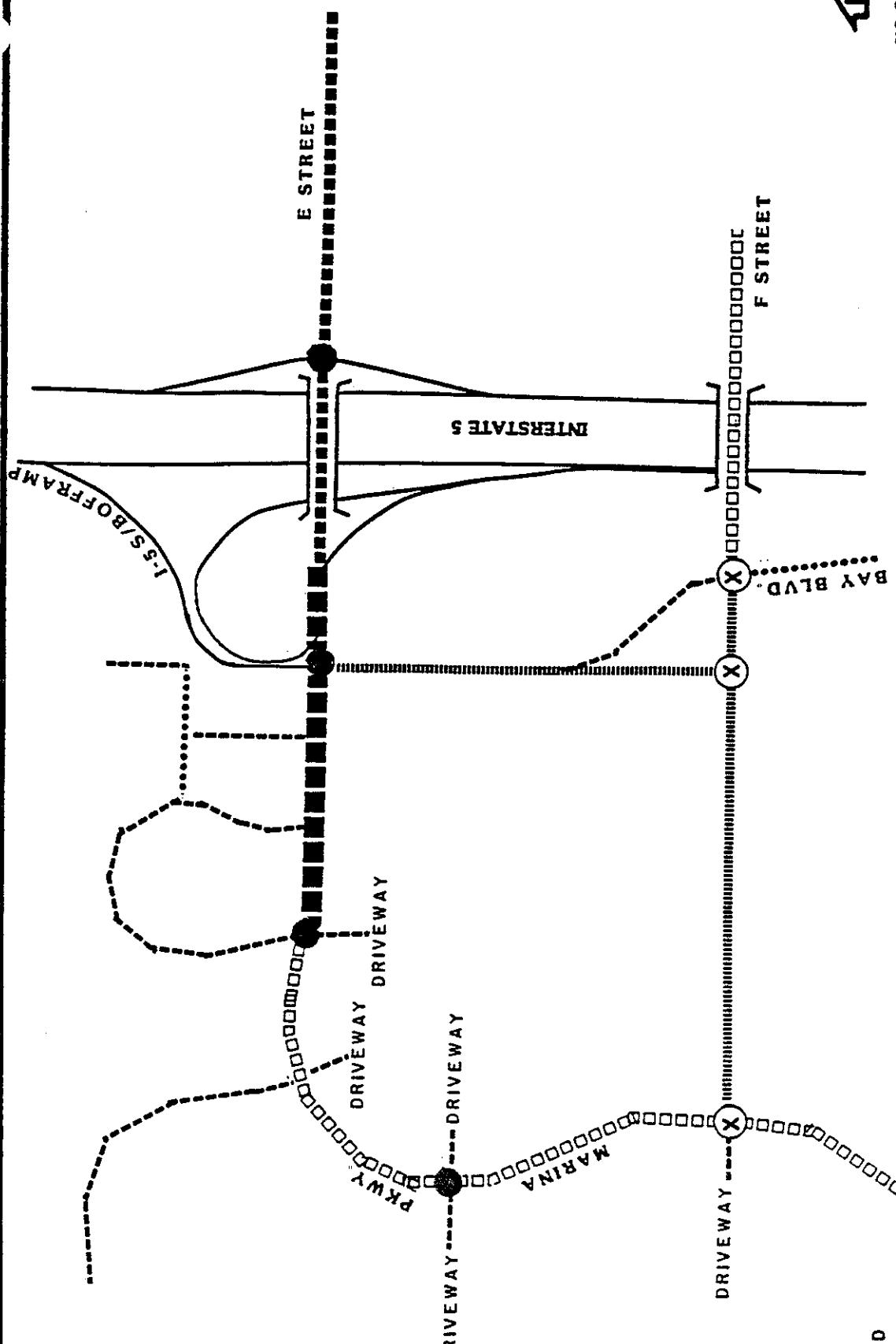
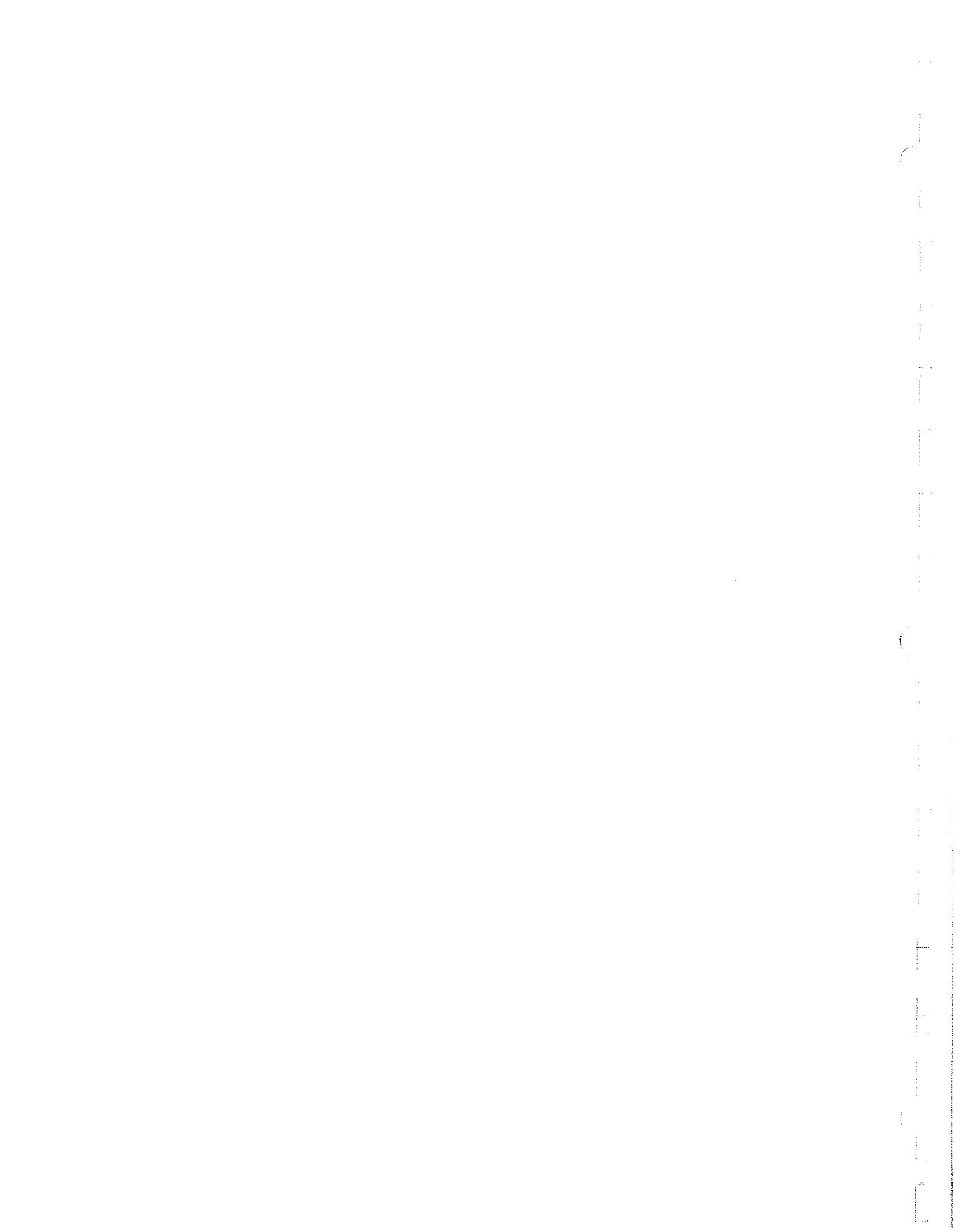


Figure 3-XXII

CHULA VISTA BAYFRONT  
URBAN SYSTEMS



### **Proposed Project**

Under the Proposed Project, the following roadway segments do not meet the City of Chula Vista operating standard of LOS C or better:

- "F" Street between 5th Avenue and Woodlawn Avenue (LOS E, D)
- Broadway between "H" and "I" Streets (LOS D)
- Broadway between "J" and "K" Streets (LOS D)
- Bay Boulevard between "E" and "F" Streets (LOS F)

It is important to note that the segment of "F" Street between Broadway and Woodlawn Avenue declined from acceptable levels-of-service under the no-build alternative to unacceptable under the proposed project. All other segments were found to be acceptable under future conditions (Year 2000).

The only segment that shows a capacity deficiency under both existing and future conditions is "E" Street from I-5 to Woodlawn Avenue. The volume-to-capacity ratio is projected to increase from 0.99 to 1.05 even with the additional capacity assumed for the addition of a westbound lane. This is a significant impact.

### **Alternatives 2, 4 and 5**

Under these alternatives all roadway segments meet the City of Chula Vista operating standards of LOS C or better.

It is important to note that the analysis of the roadway segments under Alternatives 2, 4 and 5 does not include the expanded study area that was included in the analysis of Alternative 1 and the proposed project.

### **Intersection Capacity Utilization (ICU) Analysis Using Anticipated Geometrics**

Turning movement volumes were used to determine future levels-of-service at key intersections. Five Planned Roadway Improvement Projects to be carried out by the developer and/or Caltrans were assumed to be part of the project, and were included when calculating the ICU. These include:

1. Restripe the "E" Street overpass to provide two through lanes per direction, and two left turn lanes from eastbound "E" Street to I-5.
2. Widen the northbound I-5 on ramp at "E" Street to accommodate the dual left turn lanes from eastbound "E" Street to this ramp.
3. Widen westbound "E" Street from the northbound I-5 on ramp to provide a separate right turn lane from westbound "E" Street to the I-5.
4. Restripe the I-5 northbound off ramp at "E" Street to provide an exclusive left turn lane and a shared left and right turn lane.

5. Construct I-5 southbound off ramp with four lanes to "E" Street/Marina Parkway. Additionally, provide a loop ramp for westbound "E" Street traffic to access southbound I-5.

The resulting levels of service are summarized in Table 3-12 for the a.m. and p.m. peak periods for the developer's proposal and the four alternatives. During the a.m. peak period, all intersections would operate at level of service C or better under the proposed project and the alternatives, with the exception of Alternative 2 where the level of service would decrease to level E. Under the proposed project, the critical period is the p.m. peak period when two intersections on "E" Street, at the Bay Boulevard/I-5 southbound ramps and at the I-5 northbound ramp, are expected to operate at levels of service F and E, respectively. This is a significant impact. Furthermore, the effect of the gate down time associated with the San Diego Trolley could worsen the impact. It is estimated that this down time could account for an overall reduction of intersection capacity by 10 percent. The intersection of "J" Street and the I-5 southbound ramp would operate at level of service D, although near the threshold between C and D. This is also considered a potentially significant impact because of the unknown duration of the D level of service.

Due to the over-saturation of the intersection at "E" Street and the I-5 southbound ramp during the p.m. peak period, and the resultant significant impacts, an additional analysis was performed. This analysis redistributed traffic from the "E" Street interchange south to the "H" Street interchange for the p.m. peak period. This analysis assumed that traffic which would typically use the "E" Street interchange might, as traffic conditions worsened at "E" Street, turn south and instead use the "H" Street interchange. This redistribution is not guaranteed because, unless traffic were forced guided to take a route typically not used under good conditions, the opportunity to take "E" Street could still remain the preferred choice. However, it is recognized that as drivers become familiar with the new bayfront circulation system and access to the Midbayfront Development Project, drivers will find alternate routes that have remaining capacity and do not require longer driving time than the expected delay. Thus, it is recommended that the review of the p.m. peak period focuses on the redistribution analysis which predicts future intersection capacity and levels-of-service.

Additional assumptions were made for the ICLU calculations at the intersection of "E" Street and Bay Boulevard/I-5 southbound off-ramp and the intersection of "E" Street and the I-5 northbound ramps. The input volume for the northbound right-turn movement at the intersection of "E" Street/Marina Parkway and Bay Boulevard/I-5 southbound ramp was reduced by the amount of the westbound left-turn volume. This is possible because of the ability to overlap the northbound right-turn movements with the westbound left-turn phase.

At the intersection of "E" Street and the I-5 northbound ramps, the westbound right-turn volume was reduced by one-half of the total northbound approach volume. This assumption is dependent on two requirements. First, the northbound through movement should be prohibited and, if possible, prevented by a physical barrier. Second, the westbound right-turn lane must be long enough so that queues from the westbound through lanes do not block vehicles trying to enter the right-turn lane. The implementation of these requirements

would allow the westbound right-turn to operate at maximum efficiency due to the allocation of additional green time (with the possibility of providing overlap signal phasing).

The resulting levels-of-service estimates for the proposed project and each alternative are summarized in Table 3-11 for the a.m. and p.m. peak periods. Table 3-12 summarizes the findings of the ICU analysis for the intersections in the expanded study area. The following discussion summarizes the finding of this intersection capacity analysis. The levels-of-service predicted in the following section are based on future geometric conditions without project mitigation. Then, the Planned Roadway Improvements, listed in the following section, are added one phase at a time and the resulting improvements to the levels-of-service are described.

#### Alternative 1 - No-Project

The predicted intersection levels-of-service were analyzed under Year 2000 conditions under Alternative 1. This analysis revealed that during the a.m. peak hour all study area intersections will operate at LOS C or better. During the p.m. peak hour the following intersections would operate at unacceptable (LOS D or worse - Arterial Intersections, LOS E or worse - Freeway Ramp Intersections) levels-of-service under this scenario:

- Broadway/E Street (LOS E, ICU 0.94)
- Broadway/F Street (LOS D, ICU 0.82)
- Broadway/H Street (LOS D, ICU 0.87)

The remaining intersections are predicted to operate at acceptable levels-of-service during the p.m. peak hour.

#### Proposed Project

The Year 2000 condition was analyzed with the traffic generated by the Proposed Project added to the No-Project condition. This analysis revealed that under this condition, like the No-Project condition, all study area intersections will operate at LOS C or better during the a.m. peak hour with the exception of Broadway/"H" Street which will operate at LOS D and I-5 northbound ramps at "E" Street which will operate at LOS F. During the p.m. peak hour, with the proposed project generated traffic added to the network, the following intersections will operate at unacceptable levels-of-service (LOS D or worse - Arterial Intersections, LOS E or worse -Freeway Ramp Intersections).

- I-5 Southbound Ramp/E Street (LOS F, ICU 1.02)
- I-5 Northbound Ramp/E Street (LOS F, ICU 1.38)
- Woodlawn Avenue/E Street (LOS D, ICU 0.84)
- Broadway/E Street (LOS F, ICU 1.05)
- Broadway/F Street (LOS E, ICU 0.91)
- Broadway/H Street (LOS E, ICU 0.98)

The remaining study area intersections are expected to operate at acceptable levels during the p.m. peak hour.

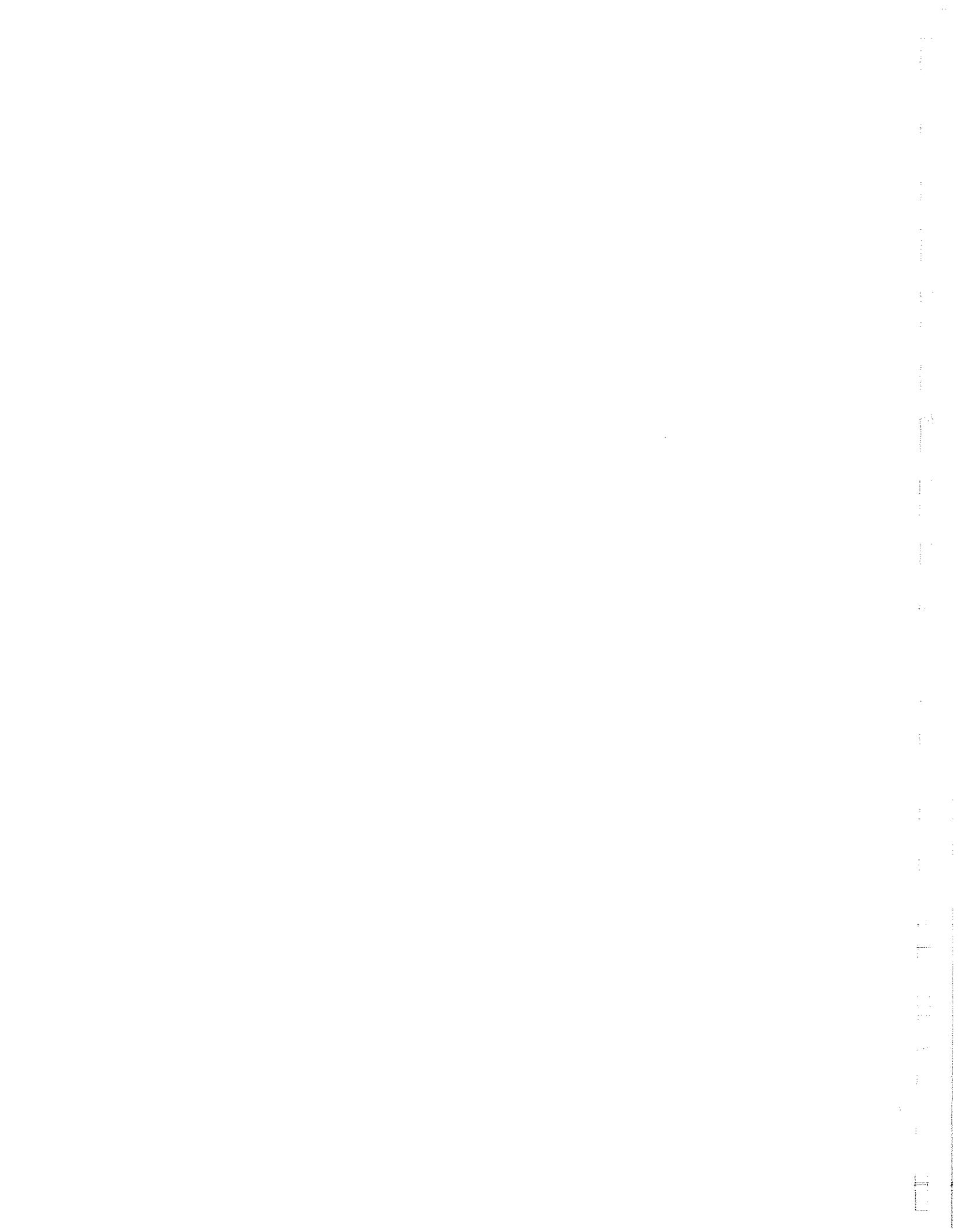


Table 3-11

**PROJECTED LEVELS OF SERVICE  
FUTURE CONDITIONS YEAR 2000 - ORIGINAL STUDY AREA INTERSECTIONS  
WITH ORIGINAL DISTRIBUTION ASSUMPTIONS**

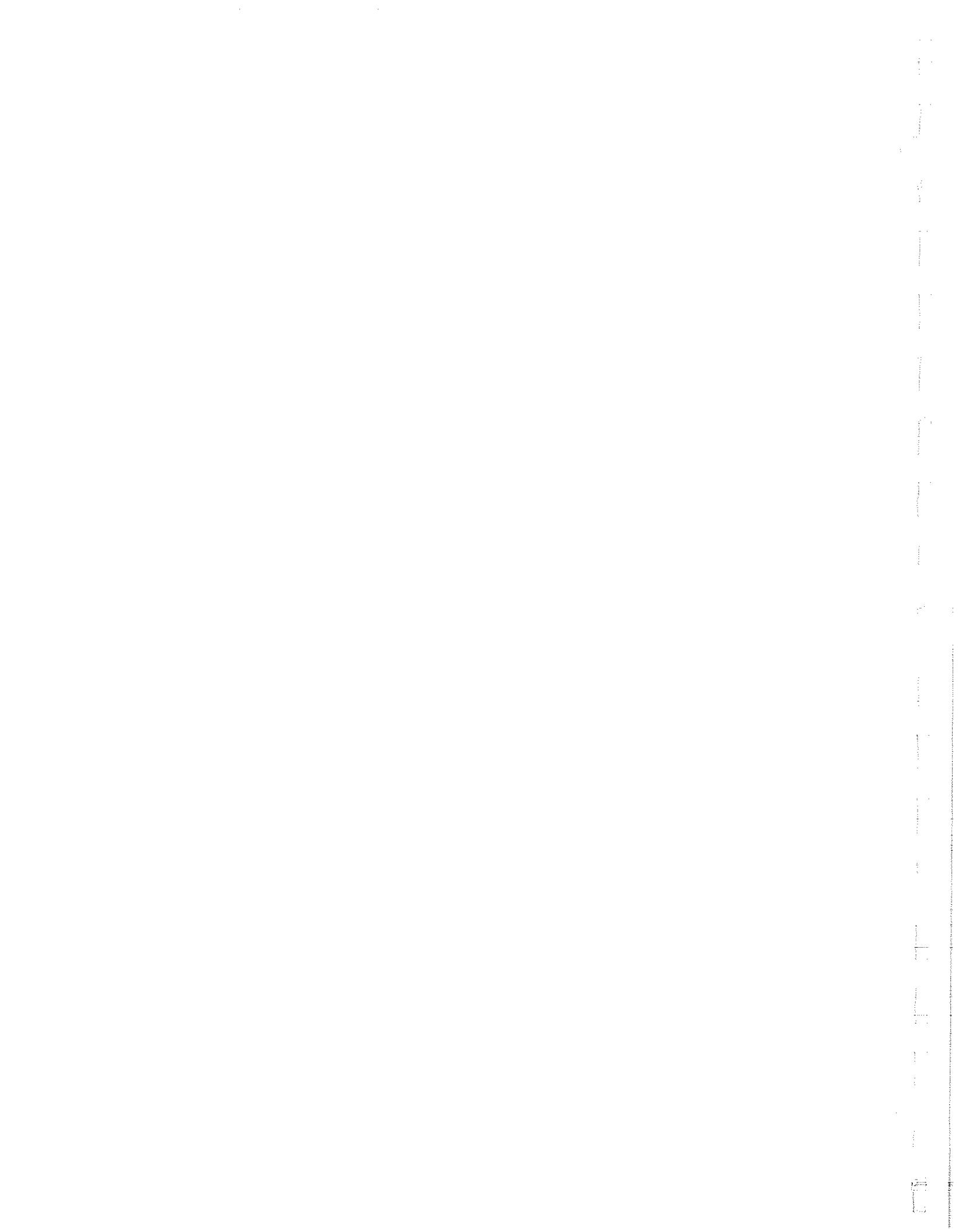
| Intersection    |             | AM Peak Hour       |     |                  |     |                 |     |                 |     |                  |     |                  |     |
|-----------------|-------------|--------------------|-----|------------------|-----|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
|                 |             | Existing Year 1989 |     | Proposed Project |     | Alternative One |     | Alternative Two |     | Alternative Four |     | Alternative Five |     |
|                 |             |                    |     | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| N/S Street      | E/W Street  | ICU                | LOS | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| Bay Bl/I-5 SB   | E St/Marina | 0.34               | A   | 0.74             | C   | 0.52            | A   | 0.83            | D   | 0.72             | C   | 0.65             | B   |
| I-5 NB Ramp     | E Street    | 0.39               | A   | 1.05             | F   | 0.71            | C   | 0.98            | E   | 0.96             | E   | 0.84             | D   |
| Maj. East Entry | Marina Pkwy | -                  | -   | 0.48             | A   | -               | -   | 0.82            | D   | 0.43             | A   | 0.42             | A   |
| Marina Pkwy     | Hotel Entry | -                  | -   | 0.40             | A   | -               | -   | -               | -   | 0.40             | A   | 0.40             | A   |
| I-5 SB Ramp     | H Street    | 0.35               | A   | 0.38             | A   | 0.38            | A   | 0.38            | A   | 0.38             | A   | 0.38             | A   |
| I-5 NB Ramp     | H Street    | 0.39               | A   | 0.66             | B   | 0.66            | B   | 0.66            | B   | 0.66             | B   | 0.66             | B   |
| Bay Blvd        | H Street    | 0.47               | A   | 0.60             | A   | 0.58            | A   | 0.58            | A   | 0.59             | A   | 0.58             | A   |
| I-5 SB Ramp     | J Street    | 0.34               | A   | 0.43             | A   | 0.41            | A   | 0.41            | A   | 0.42             | A   | 0.42             | A   |
| I-5 NB Ramp     | J Street    | 0.31               | A   | 0.66             | B   | 0.61            | B   | 0.61            | B   | 0.66             | B   | 0.65             | B   |
| Bay Blvd        | J St/Marina | 0.45               | A   | 0.64             | B   | 0.59            | A   | 0.59            | A   | 0.63             | B   | 0.63             | B   |

| Intersection    |             | PM Peak Hour       |     |                  |     |                 |     |                 |     |                  |     |                  |     |
|-----------------|-------------|--------------------|-----|------------------|-----|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
|                 |             | Existing Year 1989 |     | Future Year 2000 |     |                 |     |                 |     |                  |     |                  |     |
|                 |             |                    |     | Proposed Project |     | Alternative One |     | Alternative Two |     | Alternative Four |     | Alternative Five |     |
| N/S Street      | E/W Street  | ICU                | LOS | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| Bay Bl/I-5 SB   | E St/Marina | 0.74               | C   | 1.02             | F   | 0.73            | C   | 1.07            | F   | 0.91             | E   | 0.86             | D   |
| I-5 NB Ramp     | E Street    | 0.63               | B   | 1.38             | F   | 0.81            | D   | 1.50            | F   | 1.28             | F   | 1.14             | F   |
| Maj. East Entry | Marina Pkwy | -                  | -   | 0.63             | B   | -               | -   | 0.73            | C   | 0.58             | A   | 0.46             | A   |
| Marina Pkwy     | Hotel Entry | -                  | -   | 0.42             | A   | -               | -   | -               | -   | 0.40             | A   | 0.40             | A   |
| I-5 SB Ramp     | H Street    | 0.71               | C   | 0.76             | C   | 0.76            | C   | 1.04            | F   | 0.76             | C   | 0.76             | C   |
| I-5 NB Ramp     | H Street    | 0.65               | B   | 0.78             | C   | 0.77            | C   | 1.04            | F   | 0.77             | C   | 0.77             | C   |
| Bay Blvd        | H Street    | 0.51               | A   | 0.64             | B   | 0.56            | A   | 0.91            | E   | 0.63             | B   | 0.62             | B   |
| I-5 SB Ramp     | J Street    | 0.63               | B   | 0.81             | D   | 0.76            | C   | 0.84            | D   | 0.80             | C   | 0.79             | C   |
| I-5 NB Ramp     | J Street    | 0.43               | A   | 0.79             | C   | 0.69            | B   | 0.74            | C   | 0.78             | C   | 0.75             | C   |
| Bay Blvd        | J St/Marina | 0.52               | A   | 0.79             | C   | 0.74            | C   | 0.61            | B   | 0.78             | C   | 0.77             | C   |

## Notes:

- The input volume for the northbound right turn at the intersection of Bay Blvd/I-5 SB off-ramp and E Street/Marina Parkway was reduced by the amount of the westbound left turn volume to account for overlapping of phases for these two movements.
- The input volume for the westbound right turn at the intersection of E Street and I-5 NB ramps was reduced by one half of the total northbound approach volume. This assumes that the northbound through movement will be prohibited, and the westbound right-turn lane will be of sufficient length to avoid interference from the queue for westbound through traffic.

Source: JHK &amp; Associates



**Table 3-12**

**PROJECTED LEVELS OF SERVICE  
FUTURE CONDITIONS YEAR 2000 - EXPANDED STUDY AREA INTERSECTIONS  
WITH ORIGINAL DISTRIBUTION ASSUMPTIONS**

| A.M. Peak Hour |            |                    |     |                            |     |                     |     |
|----------------|------------|--------------------|-----|----------------------------|-----|---------------------|-----|
| Intersection   |            | Existing Year 1990 |     | Future Year 2000           |     |                     |     |
|                |            |                    |     | Alternative 1/<br>No-Build |     | Proposed<br>Project |     |
| N/S Street     | E/W Street | ICU                | LOS | ICU                        | LOS | ICU                 | LOS |
| Woodlawn       | E Street   | 0.52               | A   | 0.58                       | A   | 0.78                | C   |
| Broadway       | E Street   | 0.62               | B   | 0.68                       | B   | 0.74                | C   |
| Woodlawn       | F Street   | 0.24               | A   | 0.59                       | A   | 0.68                | B   |
| Broadway       | F Street   | 0.37               | A   | 0.63                       | B   | 0.73                | C   |
| Broadway       | H Street   | 0.42               | A   | 0.59                       | A   | 0.83                | D   |

| P.M. Peak Hour |            |                    |     |                            |     |                     |     |
|----------------|------------|--------------------|-----|----------------------------|-----|---------------------|-----|
| Intersection   |            | Existing Year 1990 |     | Future Year 2000           |     |                     |     |
|                |            |                    |     | Alternative 1/<br>No-Build |     | Proposed<br>Project |     |
| N/S Street     | E/W Street | ICU                | LOS | ICU                        | LOS | ICU                 | LOS |
| Woodlawn       | E Street   | 0.76               | C   | 0.75                       | C   | 0.84                | D   |
| Broadway       | E Street   | 0.79               | C   | 0.94                       | E   | 1.05                | F   |
| Woodlawn       | F Street   | 0.39               | A   | 0.58                       | A   | 0.66                | B   |
| Broadway       | F Street   | 0.69               | B   | 0.82                       | D   | 0.91                | E   |
| Broadway       | H Street   | 0.81               | D   | 0.87                       | D   | 0.98                | E   |

SOURCE: JHK & Associates



Due to the over-saturation of the intersection at "E" Street and the I-5 southbound ramp, additional traffic was redistributed from the "E" Street interchange south to the "H" Street interchange for the p.m. peak period. Under the proposed project the intersection would operate at acceptable levels during the a.m. peak period using the original distribution assumptions with the exception of the Broadway/"H" Street intersection and the I-5 northbound ramps which are not affected by redistribution. Therefore, traffic was not redistributed for the a.m. peak period under any of the alternatives.

An ICU analysis using the revised distribution assumptions for the p.m. peak period was then performed, and the results are summarized in Table 3-13. Using Tables 3-11 and 3-12 for comparison purposes, it can be seen that the level-of-service at the intersection of "E" Street and the Bay Boulevard/I-5 southbound ramp improved from LOS F to LOS E. Due to the redistribution of traffic from the "E" Street interchange to the "H" Street interchange, the levels-of-service at the two southerly intersections worsened; the intersection at Bay Boulevard and "H" Street decreased from LOS B to C, while the intersection at "H" Street and the I-5 southbound ramps decreased from LOS C to D. All other levels-of-service for the remaining intersections remained the same during the p.m. peak as compared to the levels under the original distribution. While there is additional reserve capacity available at the "H" Street interchange area to handle Midbayfront trip diversion, this balancing of system traffic flow will ultimately limit development opportunities in the vicinity of the "H" Street interchange.

#### Alternatives

The impact analysis for the alternatives that is presented below only includes intersections within the original study area.

Traffic volumes under Alternative 2, the existing certified Local Coastal Program alternative, are such that the levels-of-service at "E" Street and the I-5 southbound and northbound ramp intersections, and at Marina Parkway and the major east entrance, are decrease to levels D, E and D, respectively, during the a.m. peak period. Although the LCP alternative provides a reduced density of commercial visitor and residential land uses, there is an increased density of office uses. Trip rates during the peak hours for office uses are typically higher than for commercial visitor and residential uses, thereby accounting for the higher volumes at these intersections and the associated lower levels-of-service. Similarly, during the p.m. peak period, the intersection at "E" Street and the I-5 southbound ramp decreases from operates at level-of-service F. There is an improvement in level of service at the intersection of "E" Street and the I-5 northbound ramps from E to D. The level of service at the "E" Street and the I-5 northbound ramp would also be F.

Alternative 2 also poses capacity problems at "H" Street and I-5 and "H" Street and Bay Boulevard. The northbound and southbound I-5 ramps at "H" Street both operate at level-of-service F during the p.m. peak hour. In addition, Bay Boulevard and "H" Street operates at level-of-service E with the original distribution and decreases to level-of-service F after the redistribution. This is mainly due to the increased office land uses.



**Table 3-13**

**PROJECTED LEVELS OF SERVICE  
FUTURE CONDITIONS YEAR 2000 - ORIGINAL STUDY AREA INTERSECTIONS  
WITH REDISTRIBUTION OF TRIPS FROM THE E STREET INTERCHANGE**

| Intersection (2) |             | AM Peak Hour       |     |                  |     |                 |     |                 |     |                  |     |                  |     |
|------------------|-------------|--------------------|-----|------------------|-----|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
|                  |             | Existing Year 1989 |     | Proposed Project |     | Alternative One |     | Alternative Two |     | Alternative Four |     | Alternative Five |     |
|                  |             |                    |     | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| N/S Street       | E/W Street  | ICU                | LOS | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| Bay Bl/I-5 SB    | E St/Marina | 0.46               | A   | 0.78             | C   | 0.66            | B   | 0.93            | E   | 0.75             | C   | 0.69             | B   |
| I-5 SB Ramp      | H Street    | 0.35               | A   | 0.38             | A   | 0.38            | A   | 0.39            | A   | 0.38             | A   | 0.38             | A   |
| Bay Blvd         | H Street    | 0.47               | A   | 0.60             | A   | 0.58            | A   | 0.63            | B   | 0.59             | A   | 0.58             | A   |

| Intersection (2) |             | PM Peak Hour       |     |                  |     |                 |     |                 |     |                  |     |                  |     |
|------------------|-------------|--------------------|-----|------------------|-----|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
|                  |             | Existing Year 1989 |     | Proposed Project |     | Alternative One |     | Alternative Two |     | Alternative Four |     | Alternative Five |     |
|                  |             |                    |     | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| N/S Street       | E/W Street  | ICU                | LOS | ICU              | LOS | ICU             | LOS | ICU             | LOS | ICU              | LOS | ICU              | LOS |
| Bay Bl/I-5 SB    | E St/Marina | 0.71               | C   | 0.99             | E   | 0.65            | B   | 0.97            | E   | 0.81             | D   | 0.77             | C   |
| I-5 SB Ramp      | H Street    | 0.71               | C   | 0.87             | D   | 0.85            | D   | 1.14            | F   | 0.87             | D   | 0.87             | D   |
| Bay Blvd         | H Street    | 0.51               | A   | 0.77             | C   | 0.69            | B   | 1.04            | F   | 0.76             | C   | 0.75             | C   |

**Notes:**

1. The input volume for the northbound right turn at the intersection of Bay Blvd/I-5 SB off-ramp and E Street/Marina Parkway was reduced by the amount of the westbound left turn volume to account for overlapping of phases for these two movements. This reduction in the northbound right-turn volume is beyond the 35% reduction applied during the distribution of trips to account for diversion of traffic to H Street from the E Street interchange.
2. This redistribution of project trips to the H Street interchange from the E Street interchange only affects the three intersections shown on this table.

---

Source: JHK & Associates



Under Alternatives 3, 4 and 5, which represent reductions in land use density from the developer's project, all intersections would operate at level-of-service C or better during the a.m. peak period with the exception of the I-5 northbound ramp at "E" Street which would operate at level-of-service E under Alternatives 3 and 4 and D under Alternative 5. During the p.m. peak period, the intersections on "E" Street at the I-5 southbound ramps and the I-5 northbound ramps would improve from operate at level-of-service E to E under Alternative 4 and to at level-of-service D under Alternative 5. For the "E" Street I-5 northbound ramp, the p.m. level-of-service would be F under Alternatives 3, 4 and 5. While the intersection at "H" Street and the I-5 southbound ramps would continue to operate at the level-of-service D under these two three alternatives, the level-of-service at the intersection of "J" Street and the I-5 southbound ramps also would improve to be C under these reduced density alternatives.

#### **Intersection Capacity Utilization (ICU) Analysis Using Planned Roadway Improvements**

Because the analysis of project generated traffic with future geometrics resulted in unacceptable levels-of-service, additional levels-of-service calculations were undertaken by adding the Planned Roadway Improvements listed below one phase at a time.

- |                |                                                                                                                                                                                                    |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Phase 1</b> | Widen westbound "E" Street from the northbound I-5 on-ramp to provide a separate right-turn lane from northbound on-ramp. This separate right turn lane should be a minimum of 250 feet in length. |
| <b>Phase 2</b> | Widen the I-5 northbound off-ramp at "E" Street to provide an exclusive left-turn lane, a share left- and right-turn lane and an exclusive right-turn lane.                                        |
| <b>Phase 3</b> | Resurface the "E" Street overpass to provide two through lanes per direction, and two left-turn lanes from eastbound "E" Street to the I-5 northbound on-ramp.                                     |
| <b>Phase 4</b> | Widen northbound Bay Boulevard to provide an exclusive left-turn lane and two right-turn lanes.                                                                                                    |

It is important to note that Caltrans has not approved the restriping of the Interstate 5 overcrossing at "E" Street. The primary reason that approval has not been granted by Caltrans is that sub-standard lane widths are included in the proposed restriping plan. Since this bridge overcrossing is under the jurisdiction of Caltrans, their approval of any modification to the traffic flow plan at this interchange is required. In addition, the feasibility of the widening of Bay Boulevard to include three northbound lanes has not been demonstrated.

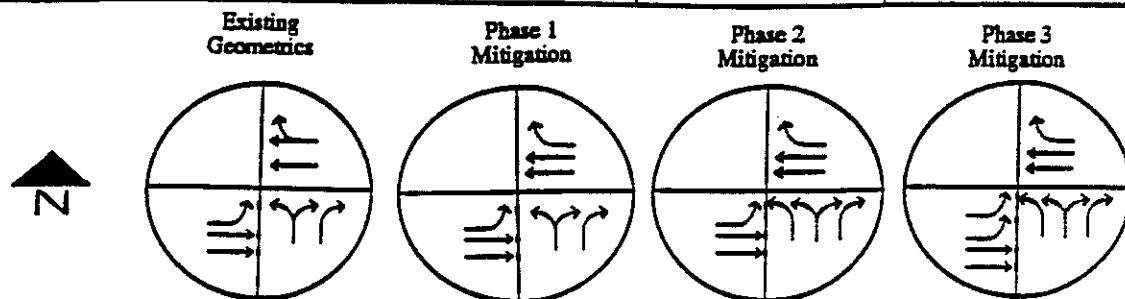
The levels-of-service estimates for the proposed project and each alternative, assuming the phases of mitigation identified under Planned Roadway Improvements one phase at a time, are summarized in Table 3-14. The following discussion summarizes the results of this intersection capacity analysis incorporating the measures outlined under Planned Roadway Improvements.



**Table 3-14**  
**PROJECTED LEVELS OF SERVICE WITH PHASED MITIGATION**  
**FUTURE CONDITIONS - YEAR 2000**

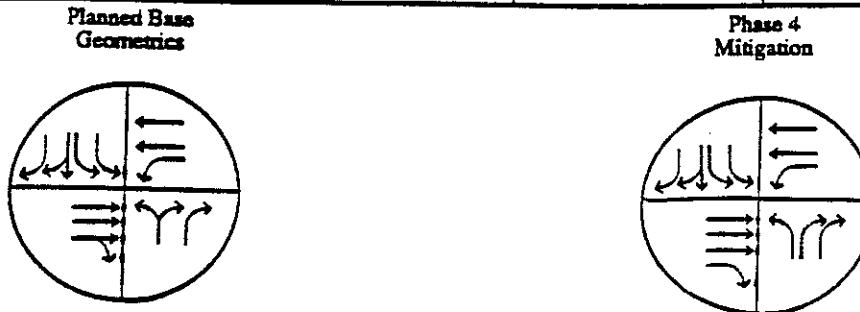
**I-5 NORTHBOUND/"E" STREET**

| Land Use Alternative | Without Mitigation |        | With Mitigation<br>Phase 1 | With Mitigation<br>Phase 2 | With Mitigation<br>Phase 3 |
|----------------------|--------------------|--------|----------------------------|----------------------------|----------------------------|
|                      | AM                 | PM     |                            |                            |                            |
|                      |                    |        | PM                         | PM                         | PM                         |
| Proposed Project     | 1.05 F             | 1.38 F | 1.37 F                     | 1.18 F                     | 0.80 D*                    |
| Alt 1                | 0.71 C             | 0.81 D | 0.73 C                     | 0.70 B                     | 0.51 A                     |
| Alt 2                | 0.98 E             | 1.50 F | 1.45 F                     | 1.20 F                     | 0.77 C                     |
| Alt 4                | 0.96 E             | 1.28 F | 1.27 F                     | 1.12 F                     | 0.76 C                     |
| Alt 5                | 0.84 D             | 1.14 F | 1.11 F                     | 1.01 F                     | 0.69 B                     |



**I-5 SOUTHBOUND/"E" STREET**

| Land Use Alternative | Without Mitigation |        | Redistribution | With Mitigation | With Mitigation And Redistribution |
|----------------------|--------------------|--------|----------------|-----------------|------------------------------------|
|                      | AM                 | PM     |                |                 |                                    |
| Proposed Project     | 0.74 C             | 1.02 F | 0.93 E         | 0.99 E          | 0.88 D                             |
| Alt 1                | 0.52 A             | 0.73 C | 0.64 B         | 0.74 C          | 0.64 B                             |
| Alt 2                | 0.83 D             | 1.07 F | 1.06 F         | 1.00 F          | 0.90 E**                           |
| Alt 4                | 0.72 C             | 0.91 E | 0.81 D         | 0.90 D          | 0.79 C                             |
| Alt 5                | 0.65 B             | 0.86 D | 0.76 C         | 0.86 D          | 0.75 C                             |



Notes: \*The calculated ICU for this condition is 0.801. Based on the recommended LOS ranges, this ICU value (in excess of 0.800) represents LOS D rather than LOS C.

\*\* The calculated ICU for this condition is 0.902. Based on the recommended LOS ranges, this ICU value (in excess of 0.900) represents LOS E rather than LOS D.



#### **Alternative 1 - No Project**

Under Alternative 1, the I-5 northbound ramp at "E" Street will operate at level-of-service C in the p.m. peak hour following implementation of the measures identified as Phase 1. Therefore, no additional mitigation is necessary at the I-5 northbound ramp at "E" Street under Alternative 1. Further, no additional mitigation was tested for the I-5 southbound ramp at "E" Street under this alternative, because without mitigation the level-of-service is C.

#### **Proposed Project**

Under the proposed project, the I-5 northbound ramp at "E" Street will operate at level-of-service D in the p.m. peak hour following implementation of the measures identified as Phase 1, 2 and 3. The I-5 southbound ramp at "E" Street will operate at level-of-service D in the p.m. peak hour following implementation of the measures identified under Phase 4 and assuming redistribution of trips from the "E" Street interchange.

#### **Alternative 2**

Under Alternative 2, the I-5 northbound ramp at "E" Street will operate at level-of-service C in the p.m. peak hour following implementation of the measures identified under Phases 1-3. The I-5 southbound ramp at "E" Street will operate at a level-of-service E in the p.m. peak hour following implementation of the measures identified under Phase 4 and assuming redistribution of trips from the "E" Street interchange.

#### **Alternative 4**

Under Alternative 4, the I-5 northbound ramp at "E" Street will operate at level-of-service C in the p.m. peak hour following implementation of the measures identified under Phases 1-3. The I-5 southbound ramp at "E" Street will operate at level-of-service C in the p.m. peak hour following implementation of the measures identified under Phase 4.

#### **Alternative 5**

Under Alternative 5, the I-5 northbound ramp at "E" Street will operate at level-of-service B in the p.m. peak hour following implementation of the measures identified under Phases 1-3. No additional mitigation was tested for the I-5 southbound ramp at "E" Street under this alternative, because without mitigation the level-of-service is D.

An ICU analysis using this redistribution was performed, and the results are summarized in Table 3-13. Using Table 3-12 for comparison purposes, it can be seen that, with redistribution, the level-of-service at the intersection of "E" Street and Bay Boulevard/I-5 southbound ramp improved from level of service F to E (which is still considered a significant impact). The "E" Street intersection with the I-5 northbound ramp remained at level of service E. Also, due to the redistribution of traffic from the "E" Street interchange to the "H" Street interchange, the levels of service at two intersections decreased: the intersection at Bay Boulevard and "H" Street decreased from level B to C, and the

~~intersection at "H" Street and the I-5 southbound ramps decreased from C to D which created a new potentially significant impact at this intersection. All other levels of service for the remaining intersections remained the same during the p.m. peak period as compared to the levels under the original distribution.~~

~~Another additional analysis of p.m. peak period operations was performed to ascertain the result of a scenario in which all existing and future Rohr development trip generation would be restricted to the p.m. off peak (before 4 p.m. and after 6 p.m.). The redistribution to "H" Street scenario described above was selected as the basis for this analysis. Again, this limitation of peak hour traffic is not guaranteed, as Rohr has not committed to any work hours limitations or shift changes, and because the "H" Street redistribution is not guaranteed.~~

~~The original traffic analysis defined the future p.m. peak period as occurring between 4:00 p.m. and 6:00 p.m., and future Rohr Development project trips were distributed accordingly. This resulted in level of service E (ICU = 0.93) at I-5 Southbound/Bay Boulevard and "E" Street/Marina Parkway and also level of service E (ICU = 0.92) at the I-5 Northbound ramp and "E" Street. This additional analysis then assigned the future Rohr development project trips to the off peak from 3:00 p.m. to 4:00 p.m. As a result of this reassignment, the p.m. peak hour (4:00 p.m. to 5:00 p.m.) levels of service at I-5 Southbound/Bay Boulevard and "E" Street/Marina Parkway improved to level of service C (ICU = 0.79) and at the I-5 Northbound ramp and "E" Street also improved to level of service D (ICU = 0.86 remains potentially significant).~~

~~The results of this additional analysis indicate that the effect of the proposed project (with all existing and future Rohr traffic generation restricted to the p.m. off peak between 3:00 p.m. and 4:00 p.m. and with redistribution) will be an extended p.m. peak period. Thus, medium to high levels of traffic activity are anticipated at and through the "E" Street/I-5 interchange over most of the afternoon peak period (i.e., 3:00 p.m. to 6:00 p.m.). Levels of service at these two critical intersections will range from C to D during this entire three hour p.m. peak period. A further discussion of the impacts resulting from extended periods of peak traffic activity is contained in the Technical Addendum Report (found in Appendix H). In summary, this additional technical analysis indicates that p.m. peak hour operations could be improved at the "E" Street/I-5 interchange under the restriction that existing Rohr traffic generation patterns in the bayfront will not change, and all future Rohr Development projects will only generate trips during off peak periods. Furthermore, as forecasted by this additional analysis, future levels of service at the interchange intersections should not exceed level D at any time of the day under normal operation conditions.~~

~~The impact analysis for the alternatives with redistribution is included below. Under Alternative 1, the no build alternative, all intersections would operate at levels of service A or B during the a.m. peak period. During the p.m. peak period, the two intersections along "E" Street at the I-5 southbound and northbound ramps that would operate at level of service E under the developer's proposal, would improve to levels C and B, respectively, under this no build alternative. As under the proposed project, the intersection along "H" Street at the I-5 southbound ramps would operate at level of service D. However,~~

~~the intersection on "J" Street at the I-5 southbound ramps, which is near the threshold between C and D under the developer's proposal, would improve to level of service C.~~

### **Highway Capacity Manual (HCM) Analysis**

The HCM method differs from the ICU method in that the operational method from the 1985 Highway Capacity Manual allows for the predictions of levels of service based on the average delay per vehicle at the intersection under analysis. In comparison, the ICU method simply indicates the amount of total signal time required in a single hour to serve key conflicting traffic movements as compared to the total time available (100 percent of the hours), arriving at a percentage of utilization.

Table 3-15 shows the results of the HCM analysis as compared to the ICU analysis method. As can be seen, the HCM methodology predicted similar levels of service to the ICU analysis method. For most locations, the HCM method predicted the same LOS as the ICU method or one level worse. Exceptions to this close agreement are under the Future Year 2000 (Proposed Project) conditions at the I-5 Northbound Ramp/"E" Street intersection during the AM peak where the HCM method predicts improved levels of service by two full LOS ranges.

### **Mitigation**

#### **Proposed Project**

The following Planned Roadway Improvement projects are required mitigation to achieve the cited impacts associated with the proposed project.

- |                |                                                                                                                                                                                                                                    |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Phase 1</b> | Widen westbound "E" Street from the northbound I-5 on-ramp to provide a separate right-turn lane from westbound "E" Street to the I-5 northbound on-ramp. This separate right turn lane should be a minimum of 250 feet in length. |
| <b>Phase 2</b> | Widen the I-5 northbound off-ramp at "E" Street to provide an exclusive left-turn lane, a share left- and right-turn lane and an exclusive right-turn lane.                                                                        |
| <b>Phase 3</b> | Resurface the "E" Street overpass to provide two through lanes per direction, and two left-turn lanes from eastbound "E" Street to the I-5 northbound on-ramp.                                                                     |
| <b>Phase 4</b> | Widen northbound Bay Boulevard to provide an exclusive left-turn lane and two right-turn lanes.                                                                                                                                    |

The measures identified for Phases 2 and 3 must be approved by Caltrans and the City of Chula Vista prior to accepting them as project mitigation. In addition, the feasibility of the Phase 4 measure must be demonstrated.



**Table 3-15**  
**INTERSECTION LEVEL OF SERVICE**  
**ICU vs. HCM METHODOLOGIES**

Existing Year 1989

| Intersection      | AM Peak Hour |     |       |     | PM Peak Hour |     |       |     |
|-------------------|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                   | ICU          | LOS | DELAY | LOS | ICU          | LOS | DELAY | LOS |
| I-5 SB / E Street | 0.34         | A   | 14.2  | B   | 0.74         | C   | 23.7  | C   |
| I-5 NB / E Street | 0.39         | A   | 14.6  | B   | 0.63         | B   | 21.8  | C   |

Year 2000 - Alternative 1/No Build

| Intersection      | AM Peak Hour |     |       |     | PM Peak Hour |     |       |     |
|-------------------|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                   | ICU          | LOS | DELAY | LOS | ICU          | LOS | DELAY | LOS |
| I-5 SB / E Street | 0.52         | A   | 27.9  | C   | 0.73         | C   | 17.2  | C   |
| I-5 NB / E Street | 0.71         | C   | 12.9  | B   | 0.81         | D   | 19.2  | C   |

Year 2000 - Proposed Project

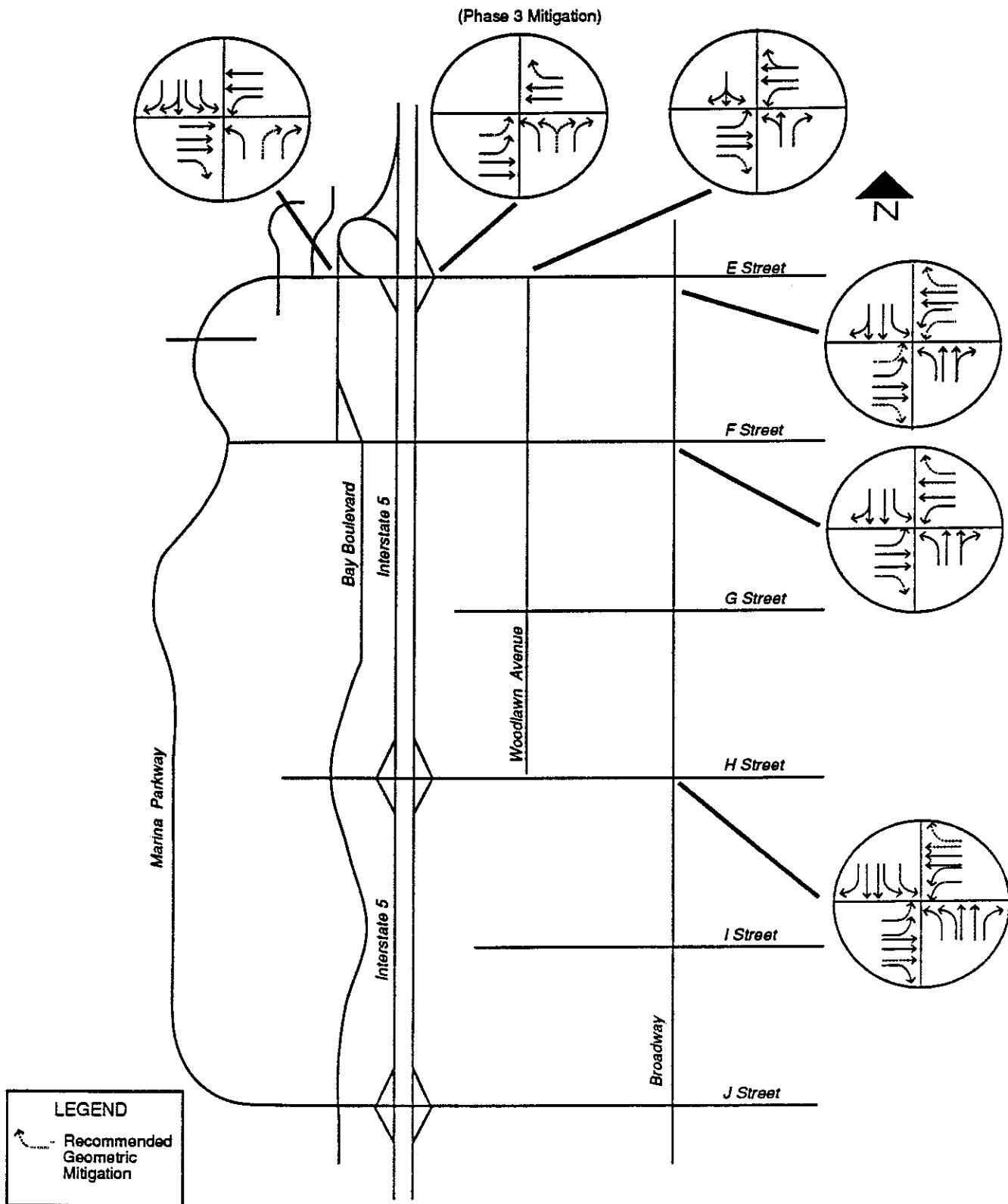
| Intersection      | AM Peak Hour |     |       |     | PM Peak Hour |     |       |     |
|-------------------|--------------|-----|-------|-----|--------------|-----|-------|-----|
|                   | ICU          | LOS | DELAY | LOS | ICU          | LOS | DELAY | LOS |
| I-5 SB / E Street | 0.74         | C   | 32.5  | D   | 1.02         | F   | 70.8  | F   |
| I-5 NB / E Street | 1.05         | F   | 30.2  | D   | 1.38         | F   | 54.5  | E   |

Year 2000 - Proposed Project - PM Peak Hour

| Intersection      | Redistribution |     |       |     | Mitigation |     |       |     | Redistribution & Mitigation |     |       |     |
|-------------------|----------------|-----|-------|-----|------------|-----|-------|-----|-----------------------------|-----|-------|-----|
|                   | ICU            | LOS | DELAY | LOS | ICU        | LOS | DELAY | LOS | ICU                         | LOS | DELAY | LOS |
| I-5 SB / E Street | 0.93           | E   | 62.4  | F   | 0.99       | E   | 34.9  | D   | 0.88                        | D   | 25.7  | D   |
| I-5 NB / E Street | N/A            | N/A | N/A   | N/A | 0.80*      | D   | 55.0  | E   | N/A                         | N/A | N/A   | N/A |

Note: \* Reflects Phase 3 mitigation for the I-5 NB/E Street intersection





**Figure 3-XXIII**

MITIGATION GEOMETRICS  
PROPOSED PROJECT  
YEAR 2000

Supplemental Traffic Data Analysis  
JHK & Associates



**Table 3-16**  
**PROJECTED LEVELS OF SERVICE WITH MITIGATION**  
**FUTURE CONDITIONS YEAR 2000**

| Intersection  |            | P.M. Peak Hour     |     |                 |     |
|---------------|------------|--------------------|-----|-----------------|-----|
|               |            | Proposed Project   |     |                 |     |
|               |            | Without Mitigation |     | With Mitigation |     |
| N/S Street    | E/W Street | ICU                | LOS | ICU             | LOS |
| Woodlawn Ave. | E Street   | 0.84               | D   | 0.78            | C   |
| Broadway      | E Street   | 1.05               | F   | 0.79            | C   |
| Broadway      | F Street   | 0.91               | E   | 0.88            | D   |
| Broadway      | H Street   | 0.98               | E   | 0.75            | C   |

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Source: JHK & Associates.



~~As described in the Impacts section, the proposed project would cause potentially significant impacts to the transportation network, especially at the "E" Street interchange. At build-out of the project in ten years the p.m. peak period levels of service at the intersections of "E" Street and the I-5 southbound and northbound ramps are projected to be E or F. A significant portion of the capacity at the "H" and "J" Street interchanges could also be used up, limiting the possibility of diversion of additional traffic from "E" Street.~~

~~The following project elements must be implemented to achieve the cited impacts. Otherwise, the impacts would result in more levels of service F at the critical "E" Street intersection. As stated earlier, these measures have been incorporated in the ICU analysis for the study area intersections in the previous chapter, and are as follows:~~

- ~~1. Restripe the "E" Street overpass over I-5 to provide two through lanes per direction and two left turn lanes from eastbound "E" Street to I-5.~~
- ~~2. Widen the northbound I-5 on ramp at "E" Street to accommodate the dual left turn lanes from eastbound "E" Street to this ramp.~~
- ~~3. Widen westbound "E" Street at the northbound I-5 on ramp to provide a separate right turn lane from westbound "E" Street.~~
- ~~4. Restripe the I-5 northbound off ramp at "E" Street to provide an exclusive left turn lane and a shared left and right turn lane.~~
- ~~5. Construct the I-5 southbound off ramp with four lanes to "E" Street/Marina Parkway. Additionally, provide a loop ramp for westbound "E" Street traffic to access southbound I-5.~~

~~Even with these proposed project elements, significant impacts would occur to the capacity of "E" Street from I-5 to Woodlawn Avenue, and to the "E" Street intersections at the Bay Boulevard/I-5 southbound ramp and at the I-5 northbound ramp. A significant impact would also occur to the intersection of "J" Street and the I-5 southbound ramp (due to the unknown duration of the level of service D).~~

~~Implementation of the following measures, in addition to the above, would reduce the impacts to level of service D, near the threshold of C and D (still considered a significant impact). However, the feasibility of these measures is not yet known, and, thus, cannot be used for mitigation.~~

- ~~A. The level of service at the intersection of "E" Street and the I-5 northbound ramp would be improved by widening the I-5 off ramp and providing an additional lane at this intersection. This widening would provide a three lane cross section with an exclusive left turn lane and exclusive right turn lane, and an optional left and right turn lane (this widening would require retaining walls). With this lane configuration, this intersection would operate at level of service D, although near the threshold between C and D.~~

- B. At the intersection of "E" Street/Marina Parkway at Bay Boulevard traffic conditions could be improved; if right of way could be acquired along the railroad easement, and the north/south lane alignments at the intersection could be engineered to "line up," Bay Boulevard could be widened to the west. This widening would provide three northbound lanes at the intersection, thus improving the level of service at this intersection to D.

The only other way to achieve the reductions in future impacts to a level below significant (which requires a level of service C or better), is to implement two measures. The first is to force Rohr traffic to exit onto Bay Boulevard in a southerly direction which would result in the redistribution scenario impacts. With redistribution only, level of service is improved only to level E at the "E" Street/Bay Boulevard/I-5 southbound ramp, still a significant impact; while the I-5 northbound ramp remained at level of service E. Also, the intersection at "H" Street and the I-5 southbound ramp worsened from a non-significant to a potentially significant condition (from C to D). Thus, the second measure must also be accomplished in concert with the forced redistribution, which is to limit the Rohr traffic to off peak hours (before 4:00 p.m. and after 6:00 p.m.). With this measure, the "E" Street intersections would improve to level of service C at Bay Boulevard/I-5 southbound ramp, and to level of service D at the I-5 northbound ramp, still significant.

These two measures are not proposed by the applicant, nor agreed to by Rohr, thus the impacts remain significant.

#### Mitigation for Alternatives

Alternative 2 requires additional mitigation measures at "H" Street and Bay Boulevard and at "H" Street and the northbound and southbound I-5 ramps. These include the following:

1. Construct an additional left turn lane for southbound Bay Boulevard at "H" Street.
2. Construct an additional left-turn lane for east-bound "H" Street at the northbound I-5 ramp.
3. Construct an additional left-turn lane for westbound "H" Street at the southbound I-5 ramp.
4. Provide adequate storage length for the eastbound right turn lane so that the eastbound through movement does not block it.

By implementing these measures both ramps would operate at the threshold of level of service C/D and the intersection of "H" Street and Bay Boulevard would operate at level of service C. It should be noted that the geometric configurations used for each alternative were based on future conditions and committed construction projects. Thus, any changes to these projects could affect the proposed project or the alternatives and require additional analysis.

### **Alternative 1**

The Planned Roadway Improvement projects identified under Phase 1 would be required to mitigate the impacts associated with Alternative 1. No other on-site mitigation measures would be required under Alternative 1 and all traffic impacts would be mitigated to a less than significant level.

#### **Off-Site Traffic Mitigation**

Measures 2-4 identified for the proposed project would also be required under Alternative 1. These measures would reduce the off-site impacts associated with Alternative 1 to a less than significant level.

### **Alternative 2**

The Planned Roadway Improvement projects identified under Phases 1-4 would be required to partially mitigate the impacts associated with Alternative 2.

The expanded study area was not utilized in the evaluation of Alternative 2, so evaluation of the required off-site traffic mitigation measures cannot be identified.

The mitigation measures identified for Alternative 2 would not, however, reduce the impacts associated with this alternative to a less than significant level because the level-of-service at the I-5 southbound ramp at "E" Street would remain at E in the p.m. peak hour. Thus, the traffic impacts associated with Alternative 2 remain significant and unmitigable.

### **Alternative 4**

The Planned Roadway Improvement projects identified under Phases 1-4 would be required to mitigate the impacts associated with Alternative 4.

The expanded study area was not utilized in the evaluation of Alternative 4, so the required off-site traffic mitigation measures cannot be identified.

The mitigation measures identified for Alternative 4 would reduce the impacts associated with this alternative to a less than significant level. The feasibility of the measures outlined under Phases 2, 3 and 4 has not, however, been demonstrated so impacts at the I-5 northbound and southbound ramps at "E" Street remain significant and not mitigated at the plan level.

### **Alternative 5**

The Planned Roadway Improvement projects identified under Phases 1-3 would be required to mitigate the impacts associated with Alternative 5. The measures associated with Phase 4 would not be required to mitigate Alternative 5 impacts.

The expanded study area was not utilized in the evaluation of Alternative 5, so the required mitigation measures cannot be identified.

Thus, based on the analyses performed, the mitigation measures identified under Phases 1-3 would reduce the impacts associated with Alternative 5 to a less-than-significant level. The feasibility of the measures outlined under Phases 2 and 3 has not, however, been demonstrated so impacts at the I-5 northbound ramp under Alternative 5 remain significant and not mitigated at the plan level.

#### **Transportation Demand Management and Site Specific Improvement Strategies**

Reducing the number of vehicles using the area through Transportation Demand Management (TDM) strategies would also reduce the impacts; however, there is no mechanism whereby the applicant could implement these measures. Implementation of these measures depends on individual participation, as well as on development of new regional programs or systems. These measures include the following:

1. Increased trolley service and usage;
2. Future increases in light rail service;
3. Additional rapid transit usage;
4. Creation of park and ride lots;
5. Promotion of a ride sharing program;
6. Commitment from area business to flexible work shifts; and
7. Site specific measures such as traffic signal installation (at locations to be determined in the future), signal timing, signal phasing or additional geometric improvements.

Many of these strategies are outlined in the Regional Transportation Demand Management This SANDAG recommended TDM ordinance should be considered for adoption by both the City of Chula Vista and County of San Diego. Specifically, it is recommended that the City/Developer development agreement contain a listing of individual TDM strategies and transportation system improvements to be implemented by the developer as the phased construction of the project occurs over time.

#### **Analysis of Significance**

The impacts cited below as "with mitigation" assume that the Planned Roadway Improvement Projects, listed in the Mitigation section, would be accomplished. The feasibility of the planned improvement of restriping the "E" Street overcrossing is, however, uncertain because it must be approved by Caltrans and to date only negative feedback on the acceptability of the restriping has been received from Caltrans. In addition, the feasibility of widening Bay Boulevard to provide three northbound lanes has not, as yet, been demonstrated. Further Additional off-site Mitigation Measures are required to improve levels of service at critical expanded study intersections to D or better.

The text below details the level of impact, both with and without mitigation. Development of the proposed project would result in significant impacts to intersection capacities in the

project vicinity. The following impacts are significant, and not mitigated at the plan level, but appear to have potentially feasible mitigation available.

The feasibility of these measures must, however, be confirmed prior to accepting the measures as appropriate mitigation at the project level.

#### Signalized Arterial Intersections

- Broadway/"E" Street
  - Without Mitigation (LOS F, ICU 1.05)
  - With Mitigation (LOS C, ICU 0.79)

#### Mitigation Measure:

##### Broadway/"E" Street

Westbound: Construction of an additional left-turn lane and an exclusive right-turn only lane

Eastbound: Construction of an additional left-turn lane and an exclusive right-turn only lane

- Broadway/"F" Street

- Without Mitigation (LOS E, ICU 0.91)
- With Mitigation (LOS D, ICU 0.88)

#### Mitigation Measure:

##### Broadway/"F" Street

Westbound: Restriping to provide an exclusive right-turn only lane

Eastbound: Restriping to provide an exclusive right-turn only lane

**Note:** Even with mitigation, this impact remains significant, however, traffic from the proposed project is only an incremental contribution to the Broadway/"F" Street impact.

- Broadway/"H" Street

- Without Mitigation (LOS E, ICU 0.98)
- With Mitigation (LOS C, ICU 0.75)

#### Mitigation Measure:

##### Broadway/"H" Street

Westbound: Construction to provide an additional through lane

Eastbound: Construction to provide an additional through lane and an exclusive right-turn only lane

- Woodlawn Avenue/"E" Street

- Without Mitigation (LOS D, ICU 0.84)
- With Mitigation (LOS C, ICU 0.78)

**Mitigation Measures:**

Eastbound Woodlawn Avenue/"E" Street;  
Construction of an additional right-turn only lane

**Signalized Freeway Ramp Intersections**

- I-5 Northbound Ramp/"E" Street
  - Without Mitigation (LOS F, ICU 1.38)
  - With Mitigation (LOS D, ICU 0.80)

**Mitigation Measure:**

I-5/"E" Street Interchange;  
Northbound I-5 Off-Ramp at "E" Street: Construction of an additional right-turn only lane.  
Eastbound "E" Street: Construction of double left-turn lanes to I-5 northbound on-ramp (or restriping of the "E" Street overcrossing).

- I-5 Southbound Ramp/"E" Street
  - Without Mitigation (LOS F, ICU 1.02)
  - With Mitigation (LOS E, ICU 0.99)
  - Without Mitigation, with Redistribution (LOS E, ICU 0.93)
  - With Mitigation and Redistribution (LOS D, ICU 0.88)

**Mitigation Measure:**

Widen northbound Bay Boulevard to provide an exclusive left-turn lane and two right-turn lanes.

Widen eastbound Marina Parkway to provide three through lanes and a right-turn only lane.

Finally, the gate down time of the San Diego Trolley would worsen the "E" Street impacts; it is estimated that this down time could account for an overall reduction of intersection capacity at the "E" Street/I-5 northbound ramp signalized intersection. However, the ICU method for calculating future levels-of-service is considered acceptable. To further clarify this issue, JHK conducted an analysis of these interchange intersections using the HCM "operational analysis" method based on average delay (in seconds) per vehicle (see HCM Analysis section).

Development of the proposed project would result in significant impacts to streets and intersections capacities at streets in the project vicinity. Levels of service F, E, and D would occur at:

1. "E" Street between Bay Boulevard and Woodlawn Avenue where capacity would exceed 100 percent;

- ~~2. "E" Street intersection with Bay Boulevard/I-5 southbound ramp (level of service F);~~
- ~~3. "E" Street intersection with I-5 northbound ramp (level of service E); and~~
- ~~4. "J" Street intersection with I-5 southbound ramp (level of service D).~~

~~These cited impacts assumed that five street improvements to be carried out by the developer or by Caltrans would be accomplished. If the measures were not accomplished, more levels of service F would result.~~

~~Measures have been suggested and analyzed that would reduce the levels of service to D and C (D remains significant), however, these measures are not proposed by the developer nor agreed to by an important adjacent landowner (Rohr Industries). These measures include (1) forcing Rohr traffic south to the "H" Street intersection (which worsened conditions there to levels of service D and C), instead of allowing them to access "E" Street, and (2) limiting Rohr traffic to the off peak p.m. period (limiting to 3:00 p.m. to 4:00 p.m.). Because these measures are not proposed, nor agreed to, they are not considered feasible. Thus, the cited significant impacts to street and intersection capacity are not mitigable.~~



## **4.0 ALTERNATIVES**

### **4.1 SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT**

CEQA requires a description of a range of "reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project," and to evaluate the comparative merits of the alternatives. The discussion of alternatives "shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of project objectives, or would be more costly." CEQA also requires analysis of the "no project," or existing conditions, alternative. The range of alternatives required in an EIR is governed by "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision-making and informed public participation. An EIR need not consider an alternative with effects which cannot be reasonably ascertained and the implementation of which is remote and speculative.

This project involves two actions: Resubmittal of the LCP which focuses on changes in the Midbayfront, and development of the Midbayfront according to the proposed Development Plan. The alternatives analysis includes seven ~~nine~~ alternatives, ~~four~~ five of which were development plans which were analyzed at the same level of detail as the proposed project (see Section 3.0). The alternatives are listed below; numbers 2 through 5 ~~and~~ 8 are those that are analyzed in detail.

1. No Project
2. Development Under the Existing Certified LCP
3. Reduced Density 1 (26 percent intensity decrease from developer's proposal)
4. Reduced Density 1A (26 percent intensity decrease with slightly different land use pattern)
5. Reduced Density 2 (47 percent intensity decrease; within intensity range of existing Midbayfront land uses)
6. Possible Locational Alternatives
7. Reduced Density/Modified Design Alternative
8. Applicant's Revised Development Plan
9. Alternative Developed In Response to Public Comments

### Alternative 1 - No Project - No Development

This alternative would result in leaving the project site (Midbayfront) in its present state. Some of the upland area in the Midbayfront has been degraded by human activity, otherwise, the Midbayfront area is mostly undeveloped and in a natural state.

A marine industrial area exists in the southwest corner of the site. Figure 3-VII in the Land Use section (Section 3.9) shows the Midbayfront and surrounding area land uses.

Under this alternative, the project site would remain undeveloped. No impacts would occur with this alternative, as no change to the existing setting would occur. However, even though the proposed project would create some potentially significant, unmitigable impacts, this alternative is not considered to be environmentally preferable for two reasons. The first is that the existing uses of the site could continue, which include people and pets walking through the area and intruding into the sensitive buffers of the National Wildlife Refuge areas, and illegal trash dumping. As people (and their pets, biking, cars, etc.) continue to go to the bayfront, sensitive wetland habitats and species continue to be impacted by their disturbance. No mechanism would be in place to direct people to less sensitive areas, or along less sensitive routes. The second reason is that there would be no managed opportunity for the public to access the bayfront in this location. The environmentally preferred action is one that develops the Midbayfront subarea in an environmentally sensitive manner while allowing public access to the unique bayfront area. Additionally, project objectives would not be met by this alternative, which ~~not only~~ includes redevelopment of the site, including park and other public areas development in non-sensitive areas. Thus, even though this alternative would mitigate the impacts from the high intensity of the proposed development, in light of the other factors stated above, this alternative is not ~~the preferred alternative over the proposed project~~.

### Alternative 2 - Development Under the Existing Certified LCP

The description of this alternative is included in Section 2.0, with the summary of impacts shown on Table 1-1-A and discussed throughout Section 3.0. Generally, except for traffic and biology, no significant, unmitigable impacts are expected to occur from implementation of this alternative. Traffic impacts, however, would be significant under this alternative, because of the abundance of office uses which produce large amounts of traffic at peak times. This alternative is not the environmentally preferred alternative for this reason. This alternative would also result in a significant and unmitigable impact to raptor habitat. Impacts assessed as significant for Alternative 2, but not mitigated at the plan level, include seismic hazards.

### Alternative 3 - Reduced Density 1

Alternative 3 is also described in Section 2.0, with impacts shown on Table 1-1-A and discussed throughout Section 3.0. Significant, unmitigable impacts would occur to biology (loss of raptor habitat), visual resources (obstruction of scenic bay views and impacts to the

Nature Interpretive Center) and land uses (compatibility with surrounding land uses), parks and public areas (from shading), and traffic from implementation of this alternative.—otherwise, All other cited significant impacts could be mitigated, or are considered potentially mitigable at the plan-level. This alternative is not preferred due to these potential significant, and unmitigable impacts to visual resources and land uses.

#### Alternative 4 - Reduced Density 1A

The discussion of this alternative is the same as that for Alternative 3.

#### Alternative 5 - Reduced Density 2

Significant impacts reported for Alternatives 3 and 4 above would be similar for Alternative 5. Alternative 5 is one of the three the preferred traffic alternatives, and also results in a slightly reduced level of impact to visual resources. Also, because of the decrease in intensity of this alternative from the proposed project and Alternatives 3 and 4, there are slightly reduced levels of impacts for all issue categories, though these reductions are not substantial enough to result in a change of defined impact level. For this reason, this alternative is not preferred.

#### Alternative 6 - Locational Alternatives

The alternative site locations are included in response to the recent Goleta case, in which the Court ruled that EIRs must evaluate alternative locations for a project, in addition to project alternatives located upon the same site. Alternative sites are examined in the EIR not as a viable option to the proposed project, but rather to assess whether environmental impacts from the same or a similar project might be reduced or eliminated at a site different from the proposed location. The alternative sites analysis is appropriate for only the Development Plan action of this project; resubmittal of the LCP is, of course, confined to the LCP area, and analysis of alternative sites for the LCP is, thus, inappropriate. Eight alternative sites were chosen for review; six of these sites are shown on Figure 4-I.

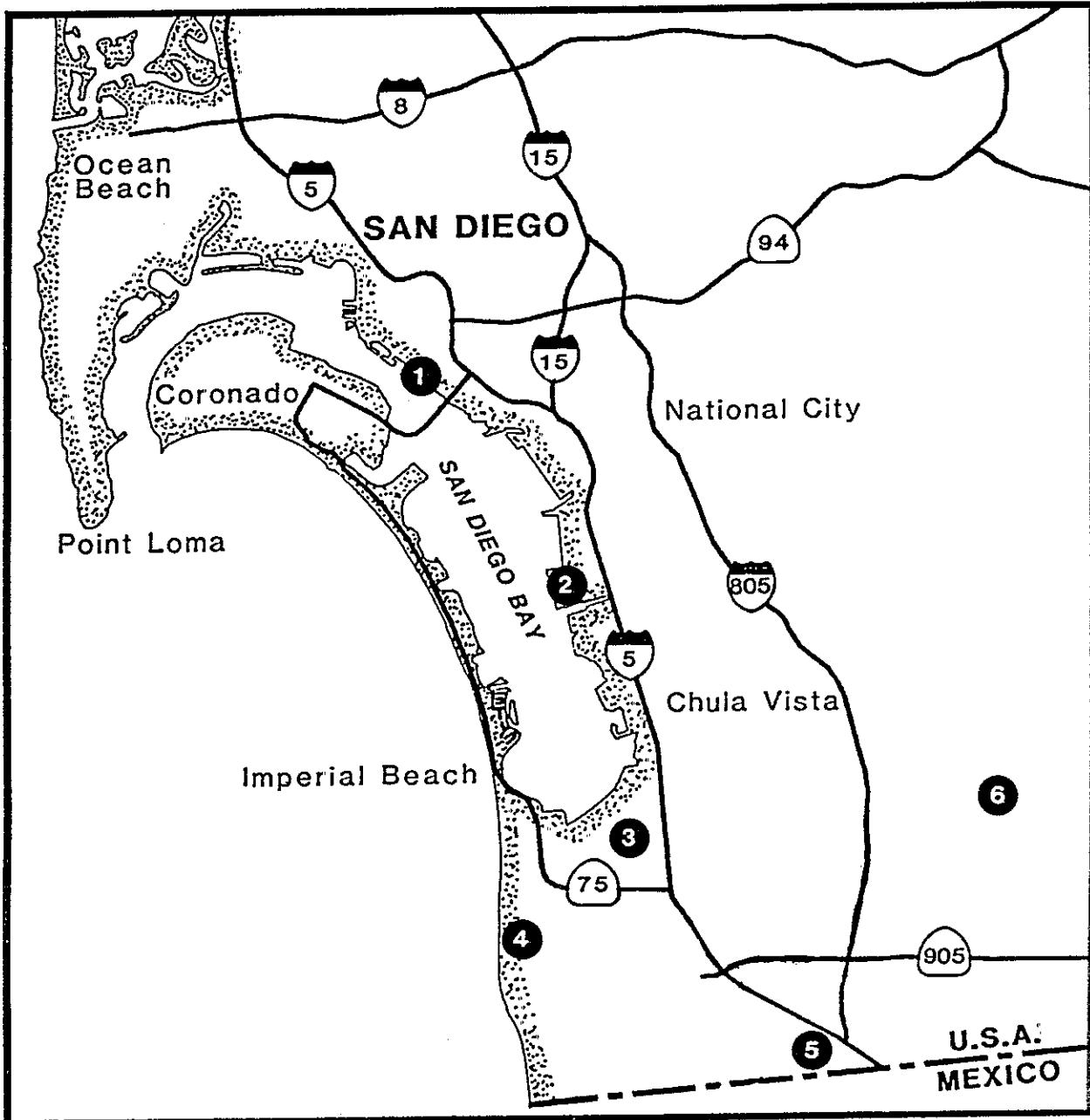
The criteria used in evaluating the sites included environmental conditions at each site, the City of Chula Vista's (Redevelopment Agency) goals, and the project applicant's goals. Environmental conditions included:

- Size of site
- Topography
- Access
- Land use compatibility
- Biological resources
- Cultural resources
- Other relevant environmental factors

The Redevelopment Agency's major goal is to generate revenue for the City from Transient Occupancy Tax received from redevelopment of the project area. A goal expressed by the City Council is development of a destination resort hotel in the project area. Both of these goals limit the alternative sites analysis to both the City's redevelopment area and to the project area. However, in order to respond to the vague requirements of the Goleta case, the alternatives sites analysis looks beyond the project site; into areas that are not only



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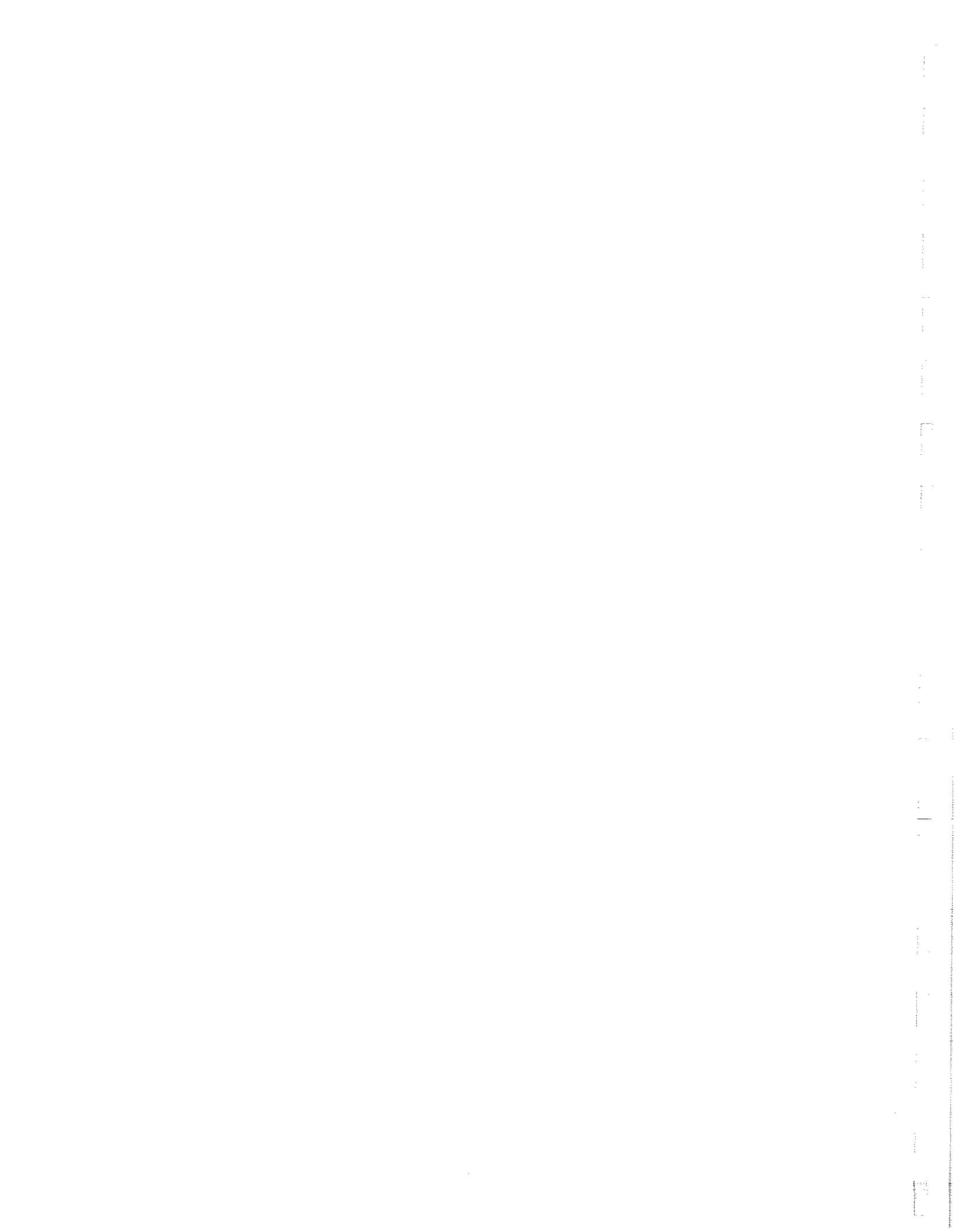


LOCATIONAL ALTERNATIVES

- ① Mercado Del Barrio
- ② Port District National City Marine Terminal
- ③ MKEG Site
- ④ Seacoast District-Imperial Beach
- ⑤ Dairymart Road
- ⑥ Eastern Urban Center



Figure 4-I

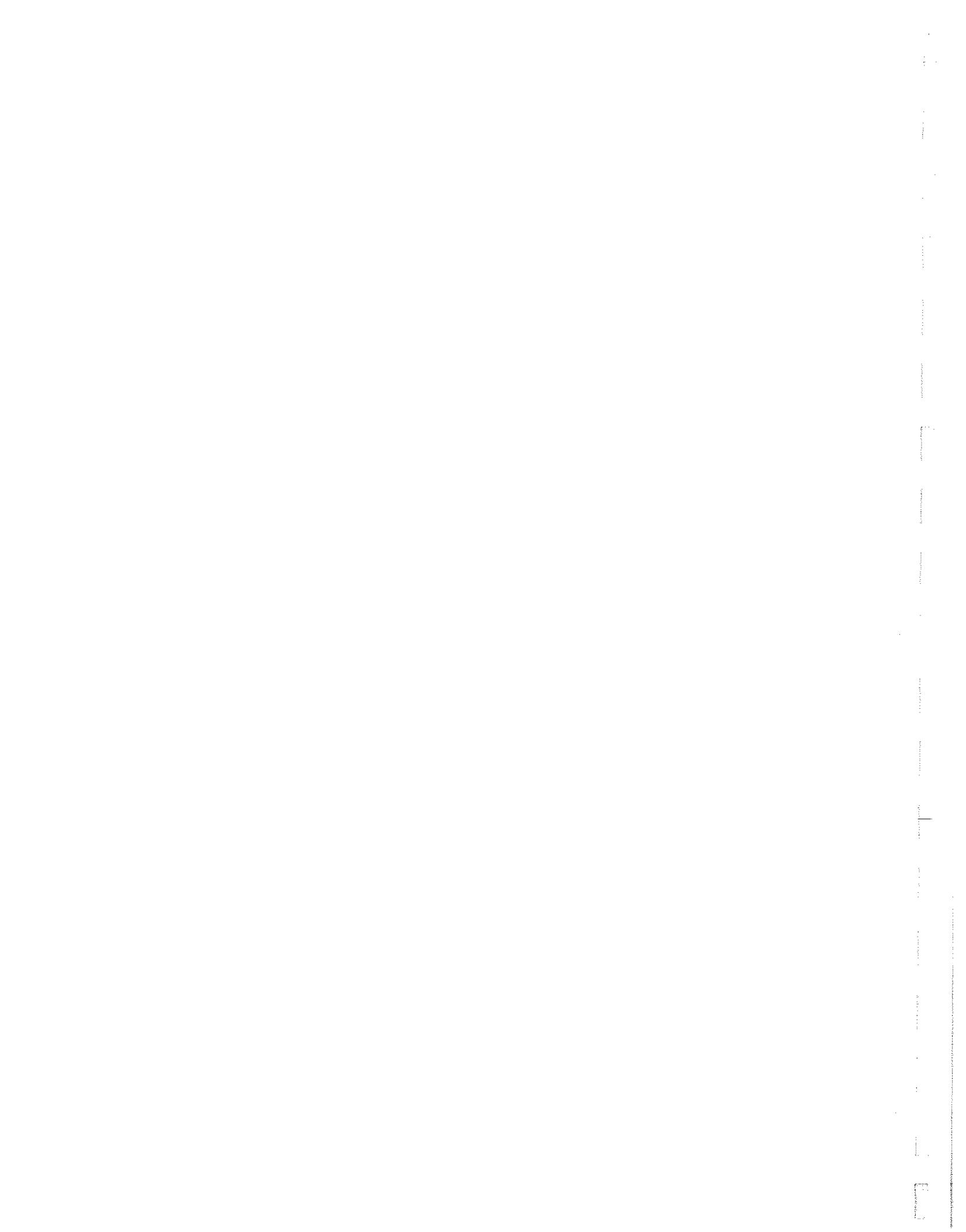


outside of the Redevelopment Agency's jurisdiction, but also outside the City limits. The applicant's goals are, likewise, limited to the project area. These goals are stated below.

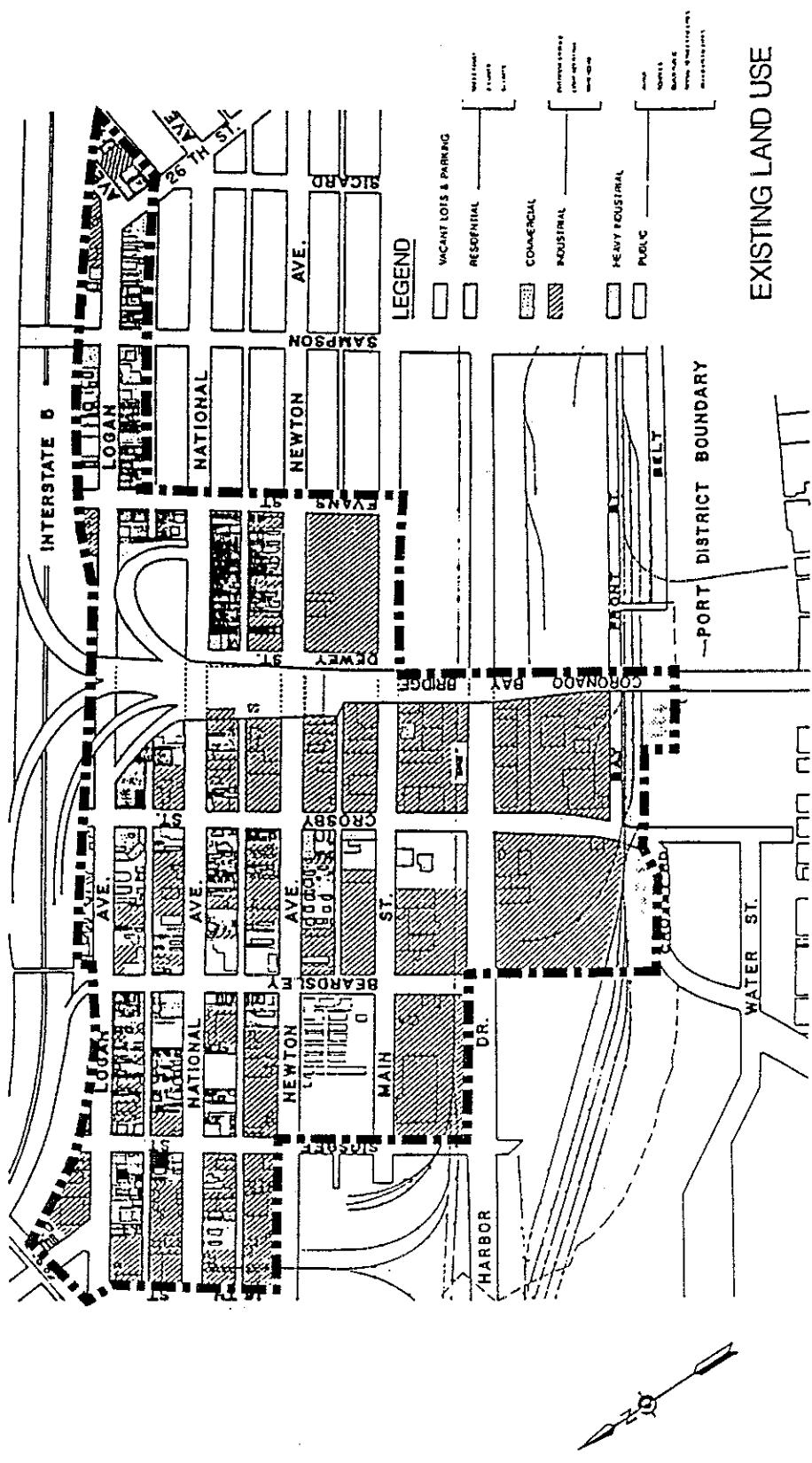
1. Locate the project adjacent to San Diego bay where coastal breezes will provide an attractive physical setting and shoreline climate for a resort center.
2. Locate the project adjacent to San Diego Bay where there is an opportunity for the future development of a marina.
3. Locate the project so as to provide public pedestrian access and bayfront recreational opportunities to the general public.
4. Locate the project immediately adjacent to I-5 to ensure adequate access to and from the project site.
5. Locate the project within a 10-minute drive time from the San Diego Centre City area to the north and Tijuana (Mexico) to the south.
6. Locate the project adjacent to the Sweetwater Marsh National Wildlife Refuge area so as to afford dramatic views over wetland habitat.
7. Restore existing degraded wetland habitat areas adjacent to the Sweetwater Marsh National Wildlife Refuge.
8. Locate the project within the redevelopment area of the City of Chula Vista for the purpose of using redevelopment and tax increment financing. The project would, in turn, provide Chula Vista with:
  - a. Property tax increment income;
  - b. Transient occupancy tax revenues;
  - c. Sales tax revenues;
  - d. Needed public park and open space areas; and
  - e. Temporary and permanent employment opportunities; and
  - f. A funding mechanism for the operation and maintenance of the Nature Interpretive Center.
9. Chula Vista Investors owns the project site and has no other significant sized parcel with the locational qualities.

#### Possible Locational Alternative 1 - Mercado Del Barrio

This site, shown on Figure 4-II, is 133 acres and is located west and adjacent to I-5 at the Coronado Bay Bridge. Existing land uses include Chicano Park, and a variety of commercial, industrial and residential land uses. Pacific Treatment Corporation hazardous waste treatment facility, located within this area, is currently proposing to expand the facility.



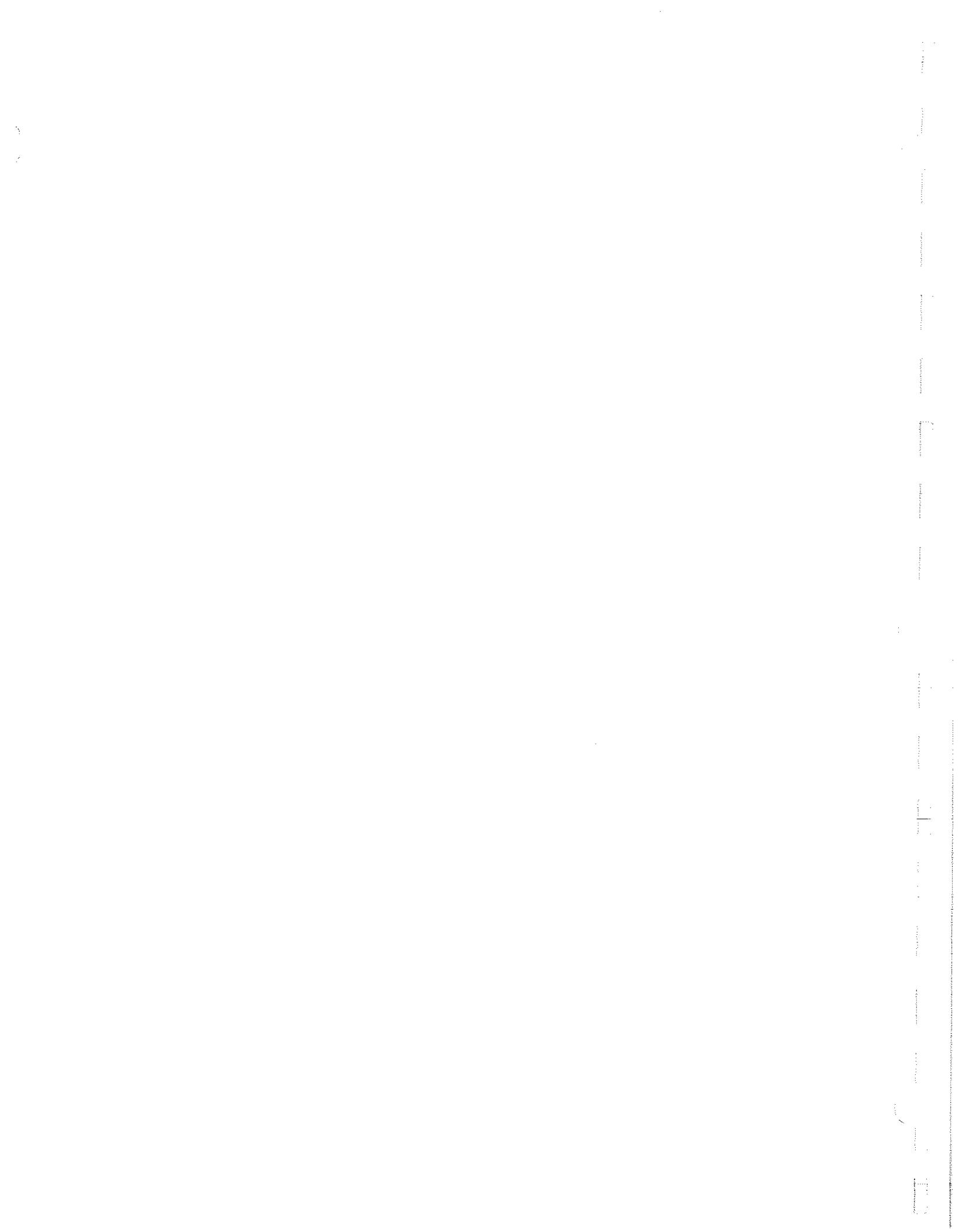
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LOCATIONAL ALTERNATIVE No. 1

Mercado Del Barrio

Figure 4-II



The City of San Diego has prepared a Draft Mercado Del Barrio Redevelopment Plan, however, this plan is not yet available for public review.

The major site constraints are hazardous wastes and social impacts. The automobile-related industries located in this area create a high potential for soil contamination of hazardous materials, which, if found, would have to be removed. This is a potential impact that could be mitigated, though costs for hazardous waste removal tend to ~~would~~ be very high.

Chicano Park is an important social and community center, and any new development here would have to be sensitive to maintaining the accessibility and viability of this Park.

Environmental impacts would be significantly reduced if the Midbayfront project were to be located at this site. In fact, all the significant impacts cited, with the possible exception of traffic would be reduced to a level below significant. However, because of the potential relocation of residents and businesses, significant social-economic impacts could occur. This site would be more sensitively redeveloped through a different type of development program which could allow existing uses to remain.

#### Possible Locational Alternative 2 - Port District National City Marine Terminal

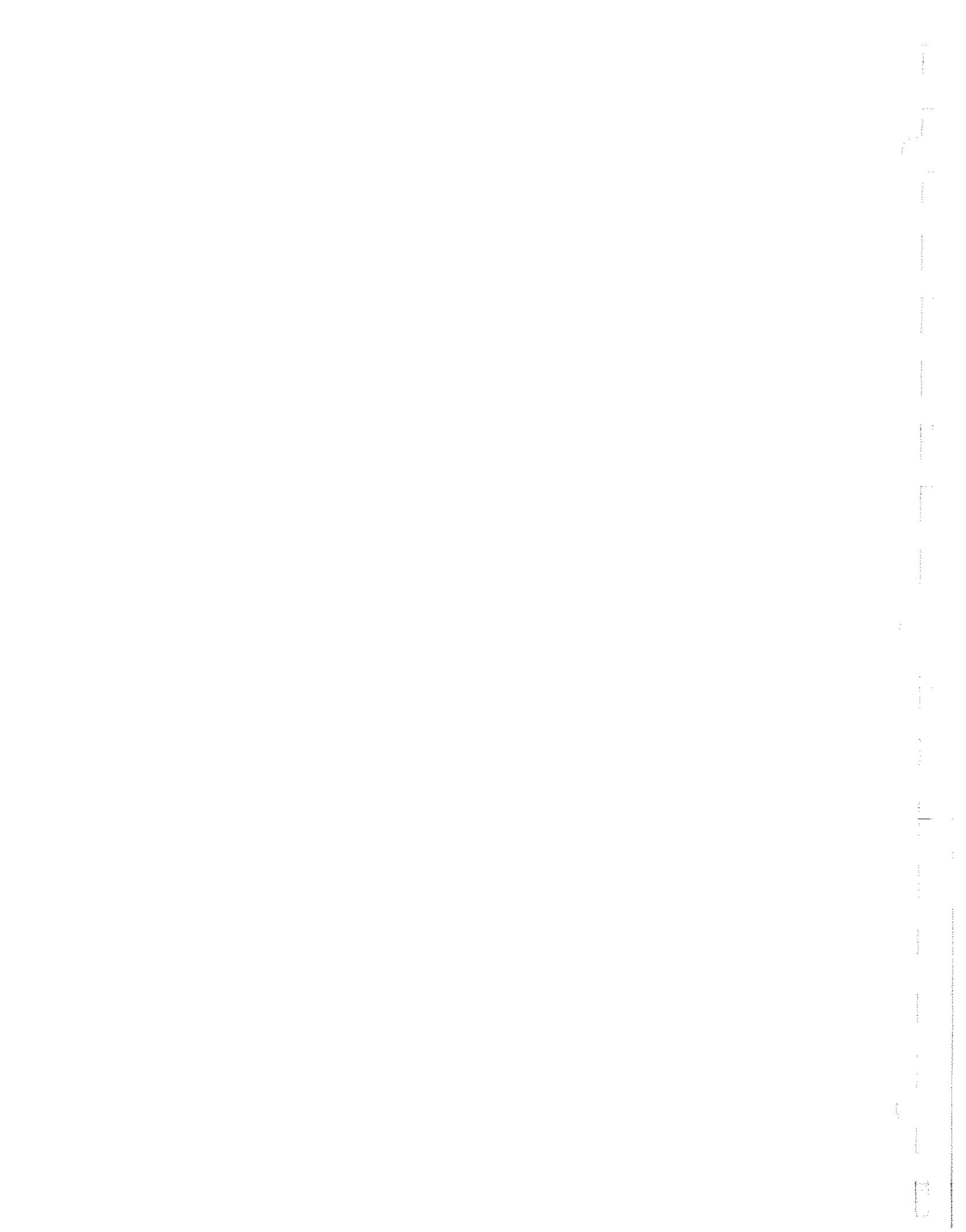
This 231-acre site is located on the bayfront at the Port District's Marine Terminal/marine industrial site in National City, just north of the Sweetwater Marsh National Wildlife Refuge (see Figure 4-III). The site is flat, is currently designated and developed to receive and export goods by ship, and is thus completely disturbed. The Port District is considering changing the existing designation of Industrial Marine Terminal/Marine Related to Commercial Recreation.

An initial review of the site has resulted in the conclusion that no significant environmental constraints are immediately evident, with the possible exception of traffic circulation. The site receives access from I-5 via 24th and 32nd Streets. No significant natural features appear to exist on the site.

At the shortest distance, the site is approximately 300 feet north of the NWR, and separated by the Sweetwater Channel. This separation would need to be increased through project design to ensure an adequate distance between the least tern nesting sites on Gunpowder Point (NWR) and the high-rise buildings.

Visual quality impacts could occur at this location because views to the bay might be blocked from the buildings. However, the intensity of the proposed development would be more compatible with the adjacent industrial, commercial and recreational uses. The objectives of the City of Chula Vista would not be met with the project located here, but the objectives of the applicant would.

Based on the preliminary environmental review, development of this site would result in significantly reduced impacts to biology, land use and community character, but could create impacts to traffic, and least terns, if not properly designed.



# LA JOLLA COASTAL ZONE MITIGATION #8

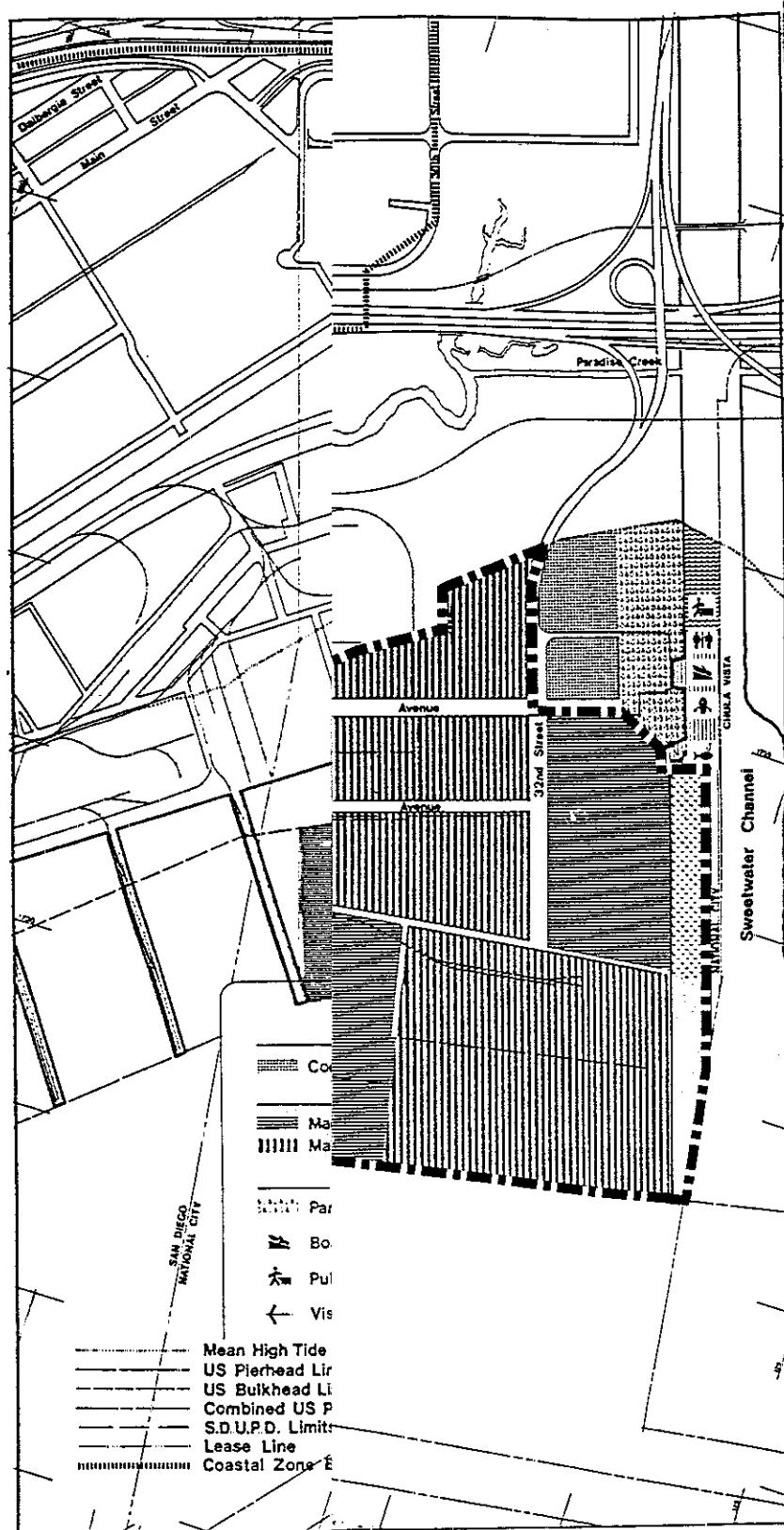


Figure 4-III



### **Possible Locational Alternative 3 - MKEG Site**

The MKEG is located approximately 2.5 miles south of the Midbayfront project area, within the corporate boundaries of the City of San Diego. This site lies in the northwestern most portion of the Otay Mesa-Nestor planning district, adjacent to and west of I-5 (see Figure 4-IV).

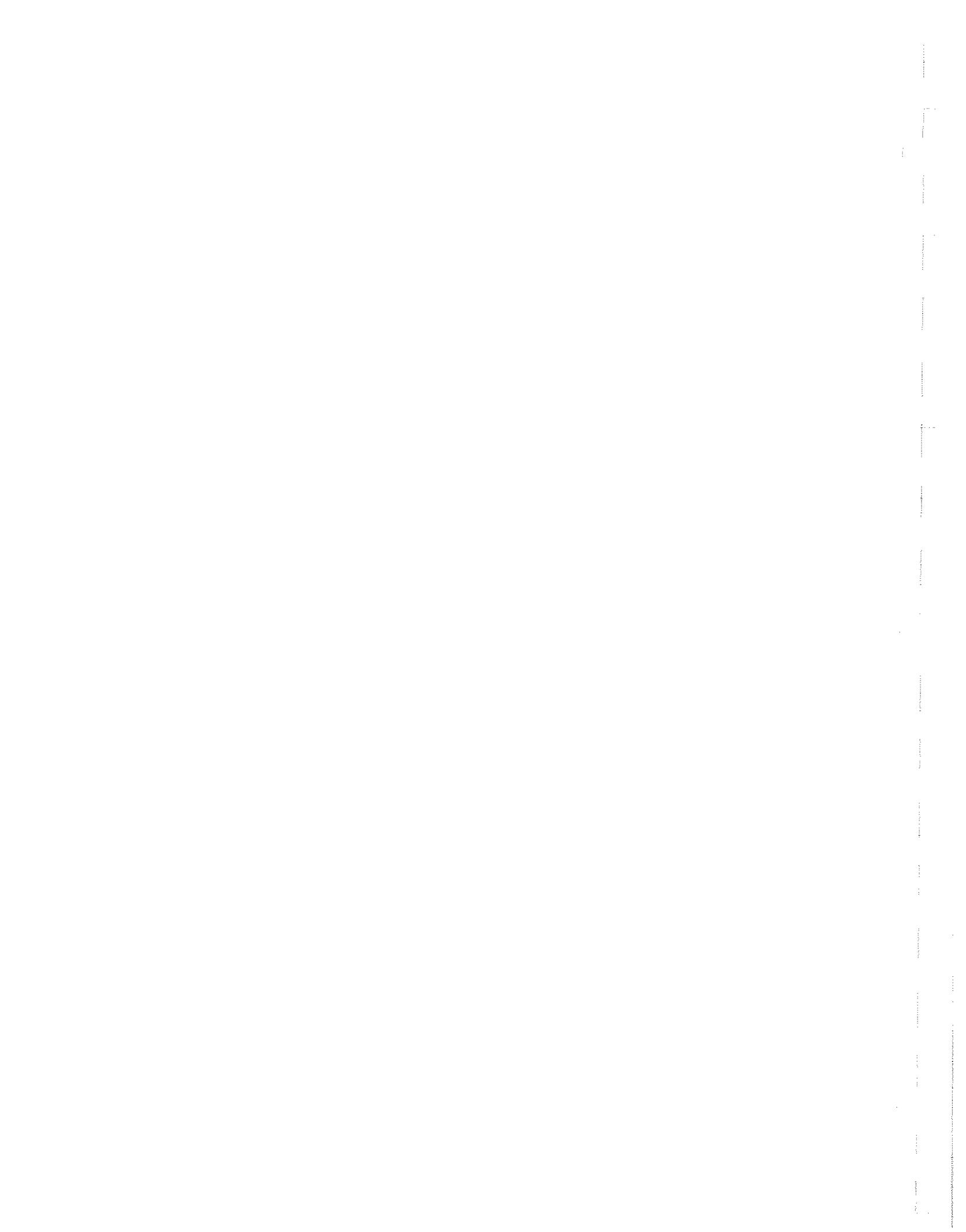
The site is flat and approximately 150 acres in size. The surrounding area uses include the salt flats to the north, a mobile home park and shopping center to the south, I-5 to the east, and a combination of agricultural land, the San Diego Bay, and salt flats to the west.

On-site land uses presently consist of agricultural uses including row and field crops, and a bike path that runs north-south through the middle of the property. City of San Diego designations for this site are Open Space and Agricultural. The City of San Diego, in an effort to continue protection of the habitat area, allows only apiaries, commercial cut flowers, field and seed crops, and truck crops to be grown on the site. The site is also subject to application of the Floodway (FW) zone. This zone permits open types of uses only, which do not impede the flow of floodwaters and are not subject to flood damage. The California Department of Fish and Game (CDFG) has designated a large portion of this site as a wildlife habitat, placing strict controls on uses within the area. In conjunction with the designation, the CDFG's long-term intent is to preserve and maintain the riparian vegetation, pursue passive observation and study of wildlife, preserve and maintain sensitive undeveloped areas, and maintain the natural and naturalized plant community.

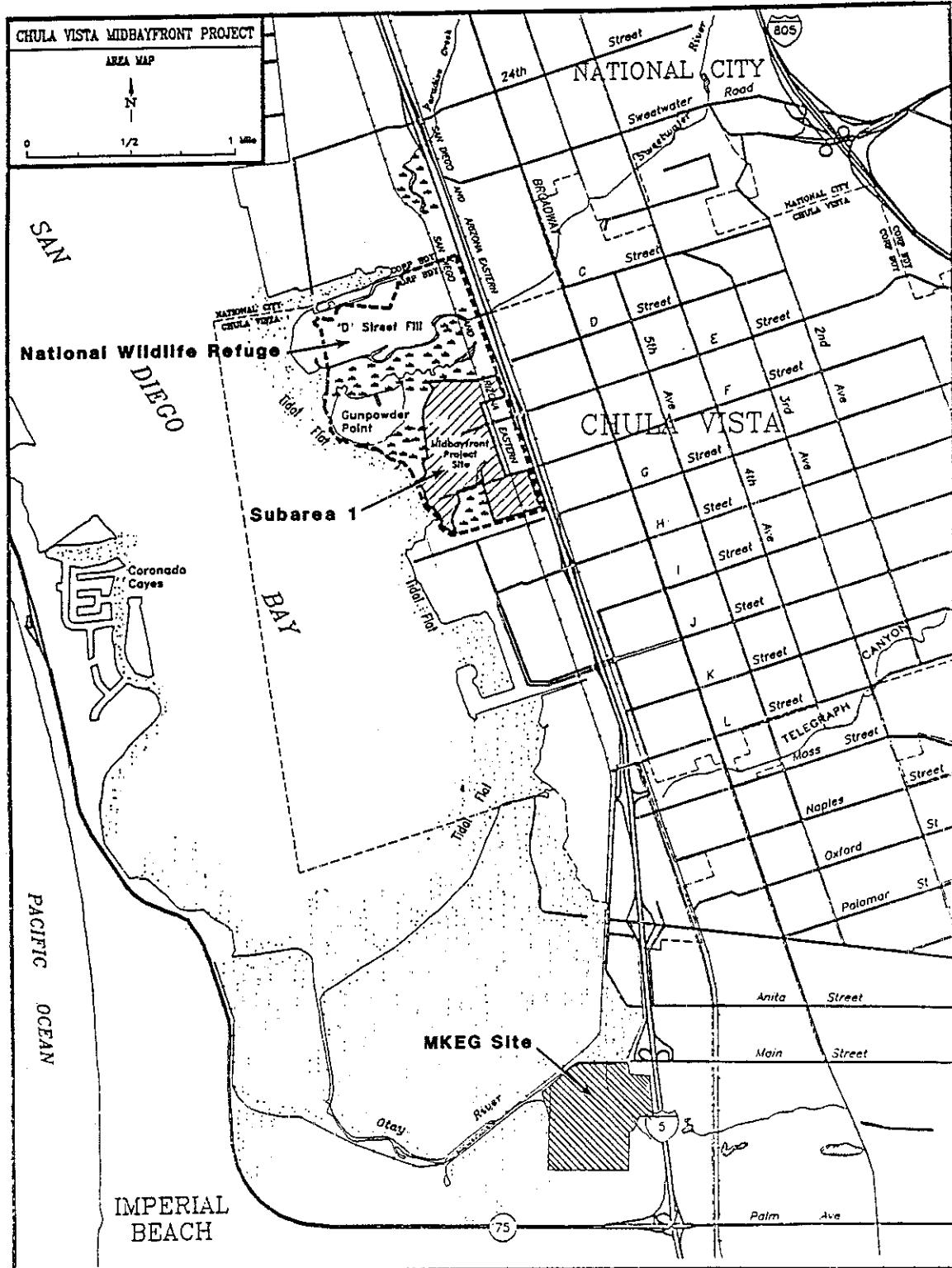
The Otay Mesa-Nestor Community Plan Amendment required environmental analysis over this alternative site location. This analysis found that the site's environmental constraints are biological (wetlands and wildlife habitat), flooding potential (within floodway and floodplain fringe) agriculture, and park and recreation (within future Otay Valley Regional Park location; Greenstein, 1990). Agriculture covers just over 100 acres and includes "prime" rated soils. Regarding biological resources, Riparian Woodland, Coastal Salt Marsh, Freshwater Marsh, and Baccharis Shrublands cover a total of approximately 13 acres. Upland disturbed fields cover over 33 acres. Three sensitive birds occur either downstream or adjacent to the site: state-listed endangered Belding's Savannah sparrow, federally listed California Least Tern, and state and federally listed Light-footed Clapper Rail. Because of the cumulative environmental sensitivity on this site, it is concluded that a Midbayfront type development would not result in reduced environmental impacts at this location.

### **Possible Locational Alternative 4 - Seacoast District - Imperial Beach**

The Seacoast District consists of 57 acres on oceanfront property in Imperial Beach (Figure 4-V). The Seacoast District Specific Plan, which is currently being reviewed by the Coastal Commission, designates this area for a beachfront hotel/motel zone which allows limited condominium development; pier/plaza area, including visitor serving commercial, public and private parking structures, plaza, kiosks, and outdoor displays; and mixed uses including hotel/motel, visitor serving commercial, public and private open space or recreational facilities, covered parking structures, restaurants and residential development.



**LODR RESUME  
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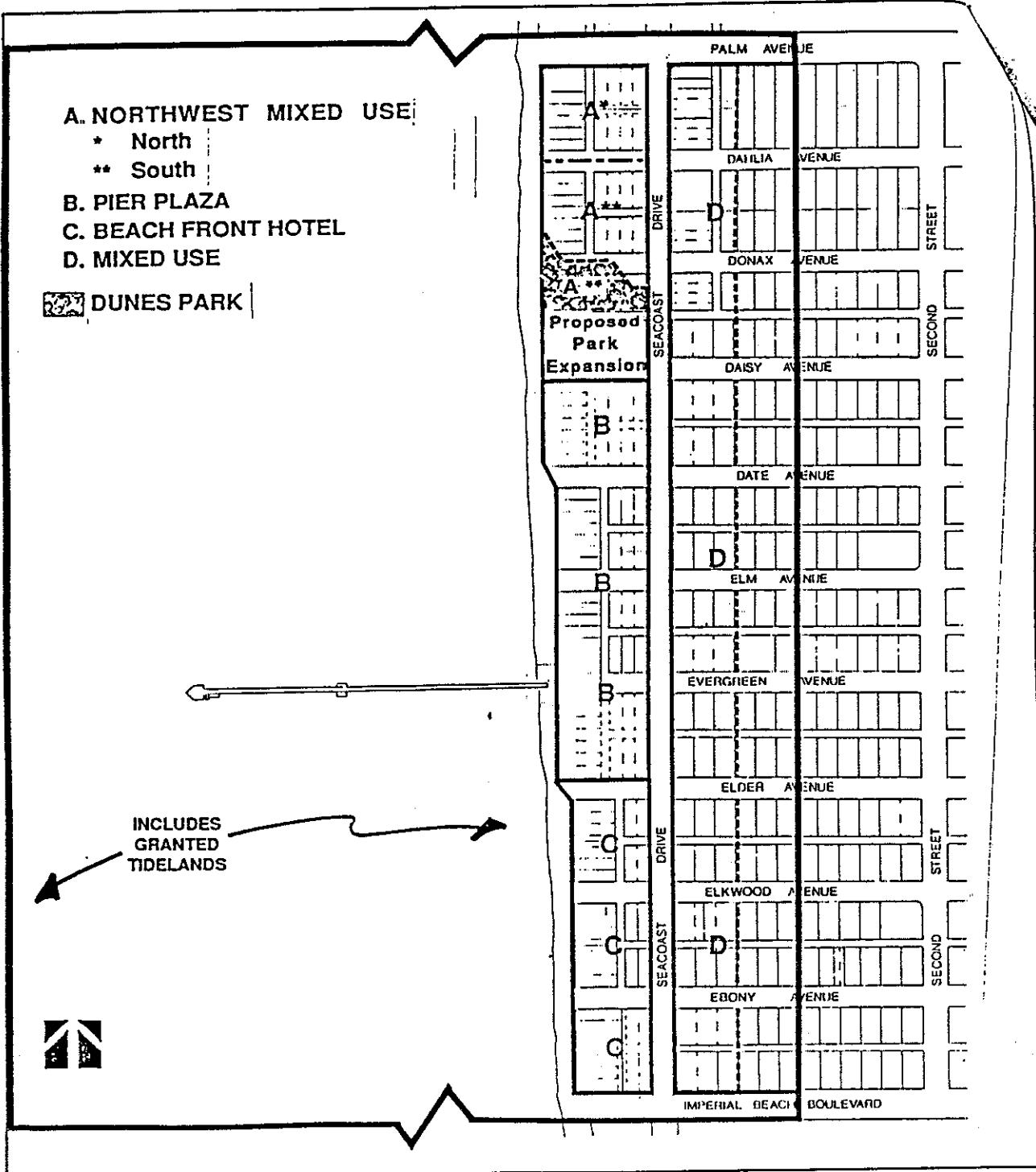


**LOCATIONAL ALTERNATIVE No.3**

**MKEG Site**



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**LOCATIONAL ALTERNATIVE No. 4**

**Seacoast District-Imperial Beach**



Access from this site is from I-5, to Highway 75, to Palm Avenue. Traffic would be the major environmental constraint at this location, and, because development presently exists in the area, no apparent natural environmental resources occur here. The site, however, is less than half the size of the Midbayfront site, and has limits of heights and densities that would prevent a project similar to the scope of the Midbayfront development from occurring here.

#### **Possible Locational Alternative 5 - Dairy Mart Road**

This site is actually comprised of two locations within this area as shown on Figure 4-VI; location No. 1 is 54 acres and location No. 2 is 90 acres. The majority of the land is currently used for agriculture, although a few single-family residences, a sand and gravel extraction facility, and an equestrian facility are also located here. Surrounding land uses include light-industrial, multi- and single-family residences, agricultural lands, the Tijuana River and the border with mixed uses (mostly residential) beyond.

The site is mostly flat and previously disturbed. The most significant environmental constraints include the River and associated riparian vegetation/habitat, agriculture and the sand and gravel operation. Also, existing on site and surrounding land uses, especially the residences, pose potential land use compatibility constraints. Due to these potentially significant environmental constraints, and the awkward nature of a split site, it appears that this site would not reduce environmental impacts from a Midbayfront type development.

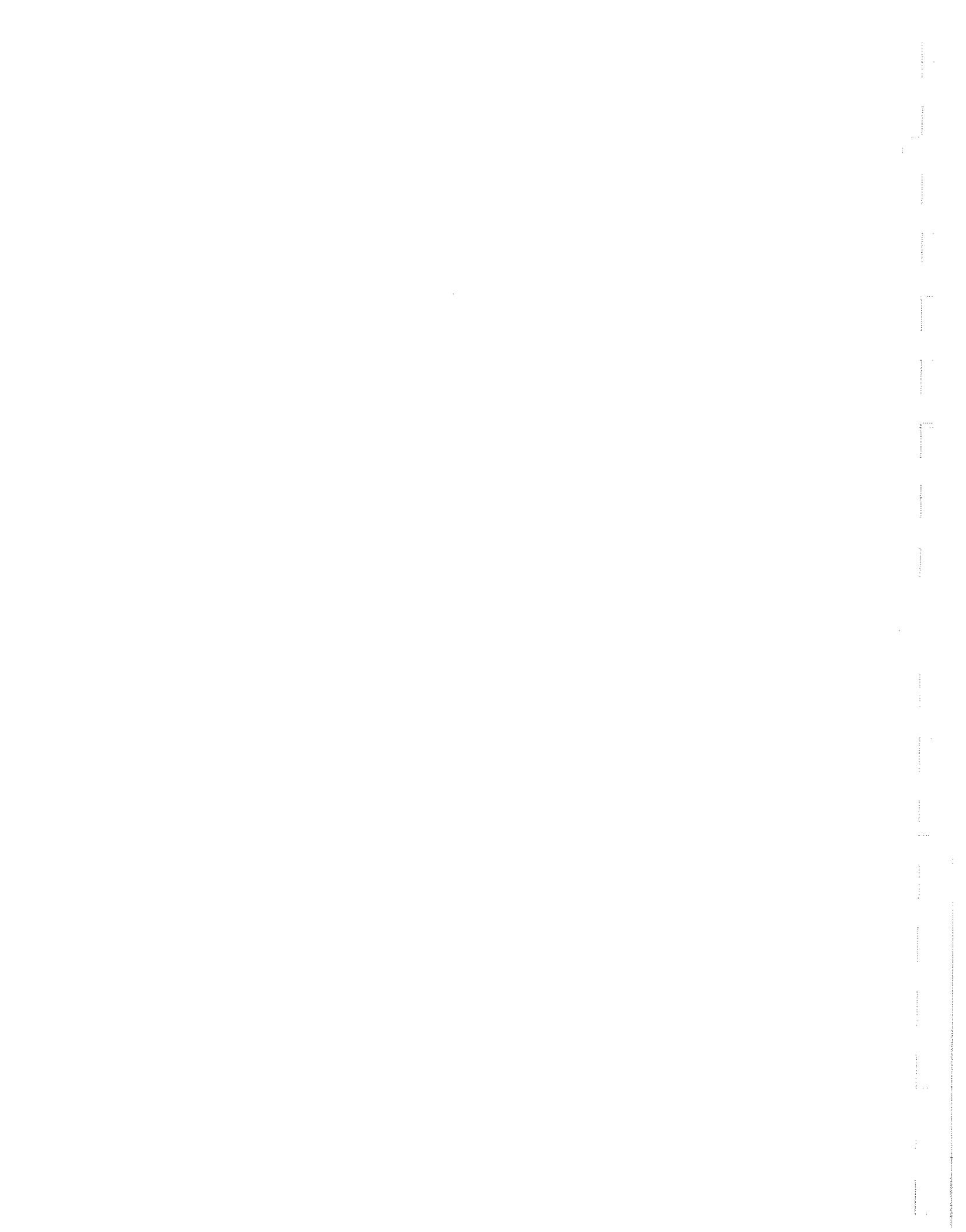
#### **Possible Locational Alternative 6 - Eastern Urban Center**

The Eastern Urban Center consists of well over 135 acres, and is presently located in the County of San Diego, though it is within the City of Chula Vista's Sphere of Influence (see Figure 4-VII). The City's General Plan (July, 1989) envisions this site for mixed uses consisting of regional retail facilities, low to potentially high-rise commercial office buildings, medium and medium-high density residences, and public recreation facilities. The site is located where the future extensions of Orange Avenue and SR~~T~~-125 would intersect.

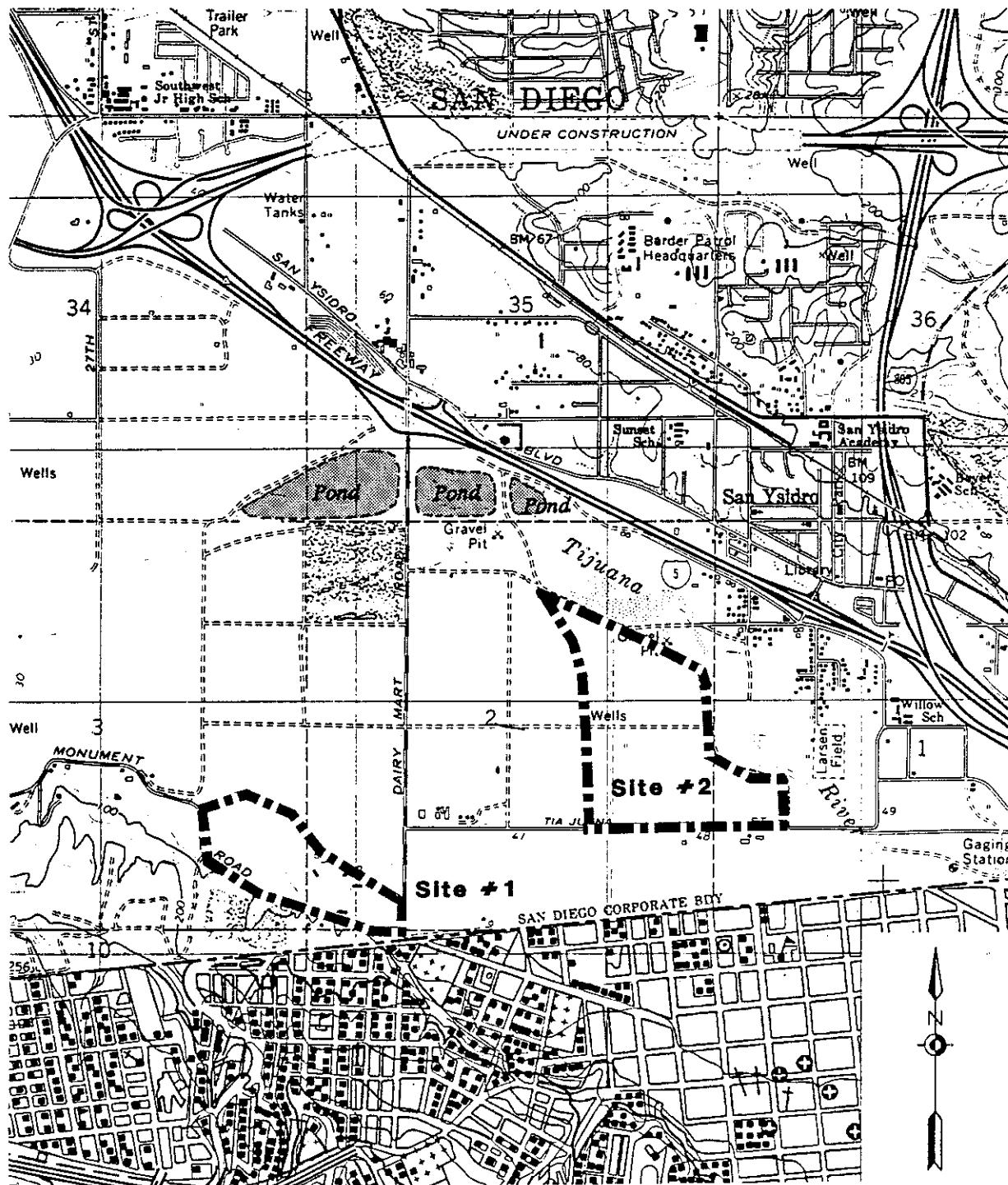
Most of this site has been disturbed by agriculture, and it is relatively flat. Access appears to be the most significant constraint, though a more detailed environmental assessment must be performed to positively identify whether potentially significant constraints exist or not. An initial review of the site identified no apparent constraints. Thus, this site may result in reduced environmental impacts from a Midbayfront type development.

#### **Possible Locational Alternative 7 - The Pointe Property**

An initial review of this site resulted in the conclusion that the site appears to be significantly constrained by at least topography and biological resources (California Gnatcatcher) and the fact that the proposed development for the site is expected to be approved soon. Thus, no further analysis occurred for this site.



**CUPRESSUSBIMMITAL #8**



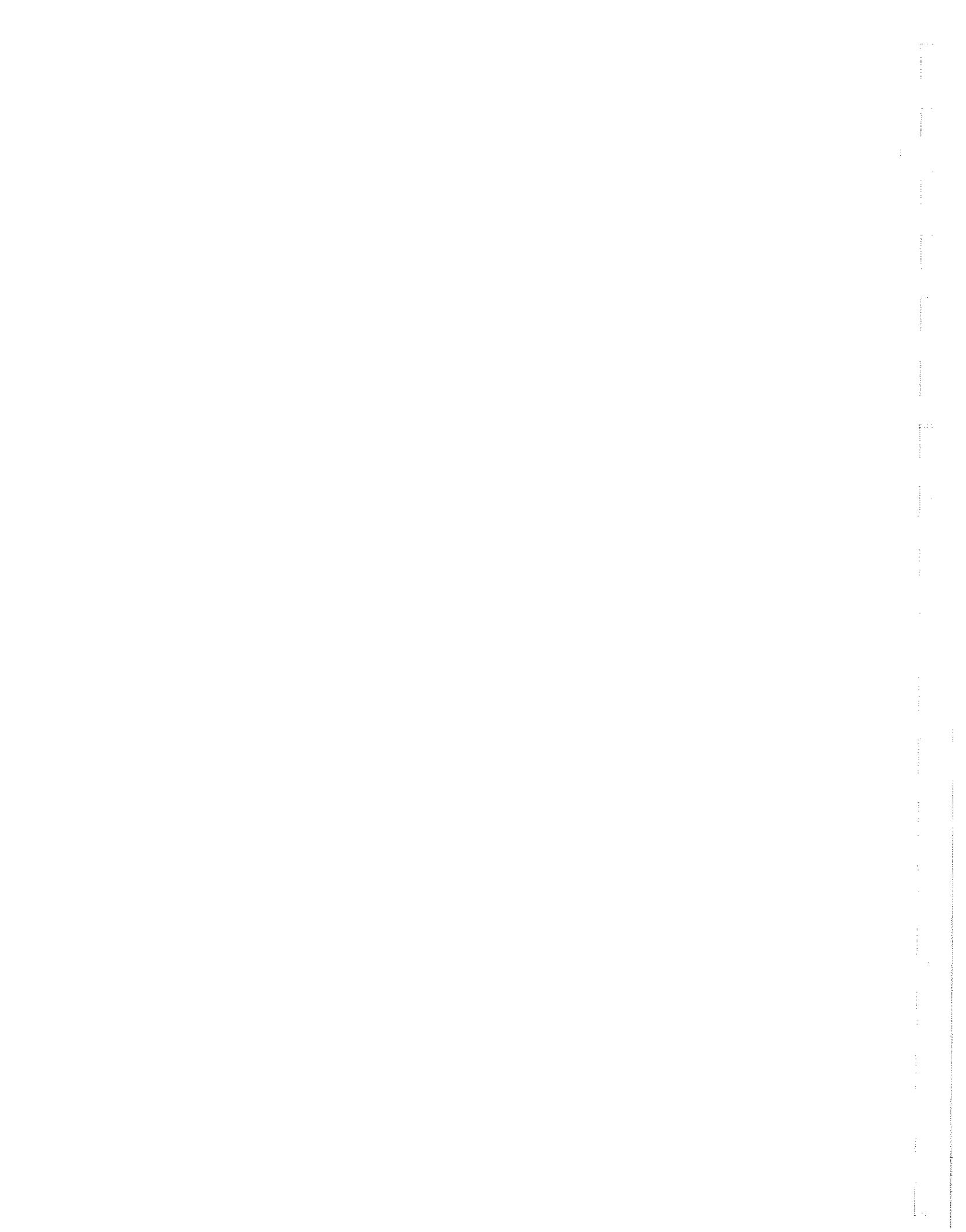
**LOCATIONAL ALTERNATIVE No. 5**

**Dairymart Road**

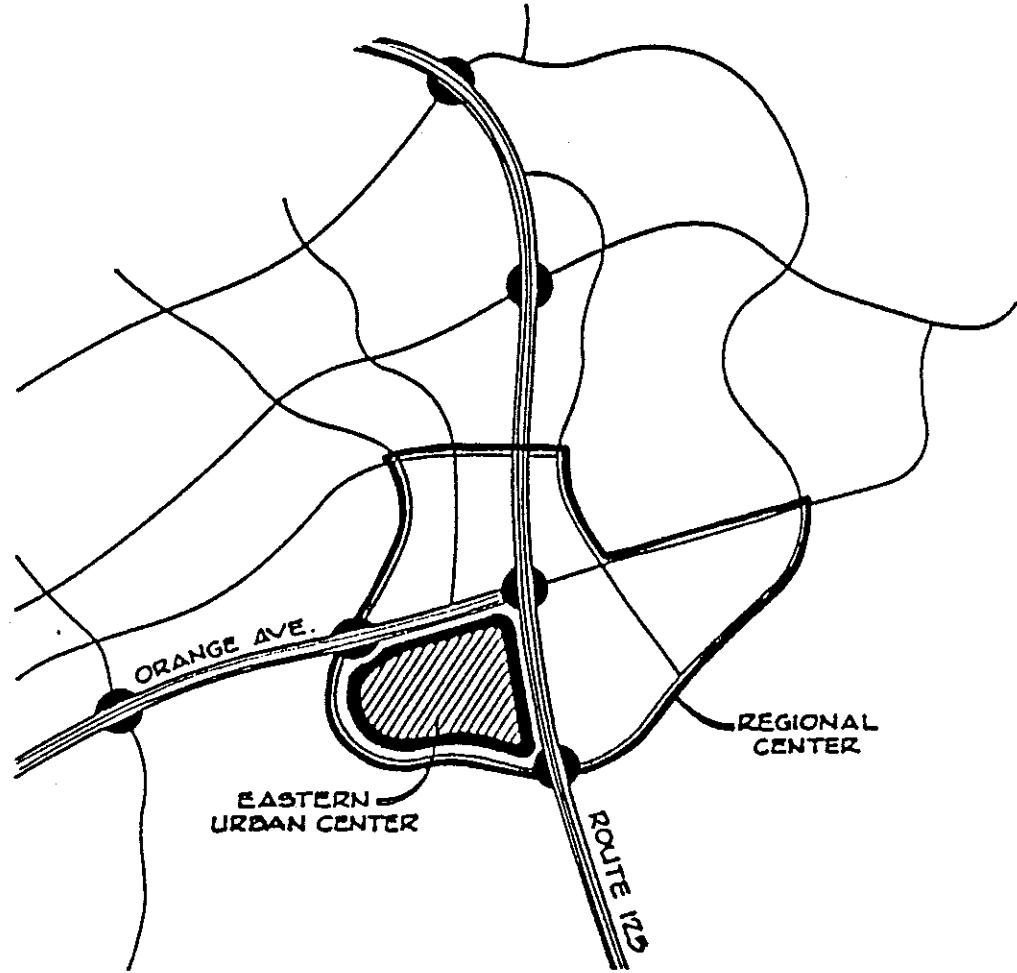
**Site #1 - 54 Acres**

**Site #2 - 90 Acres**

**Figure 4-VI**



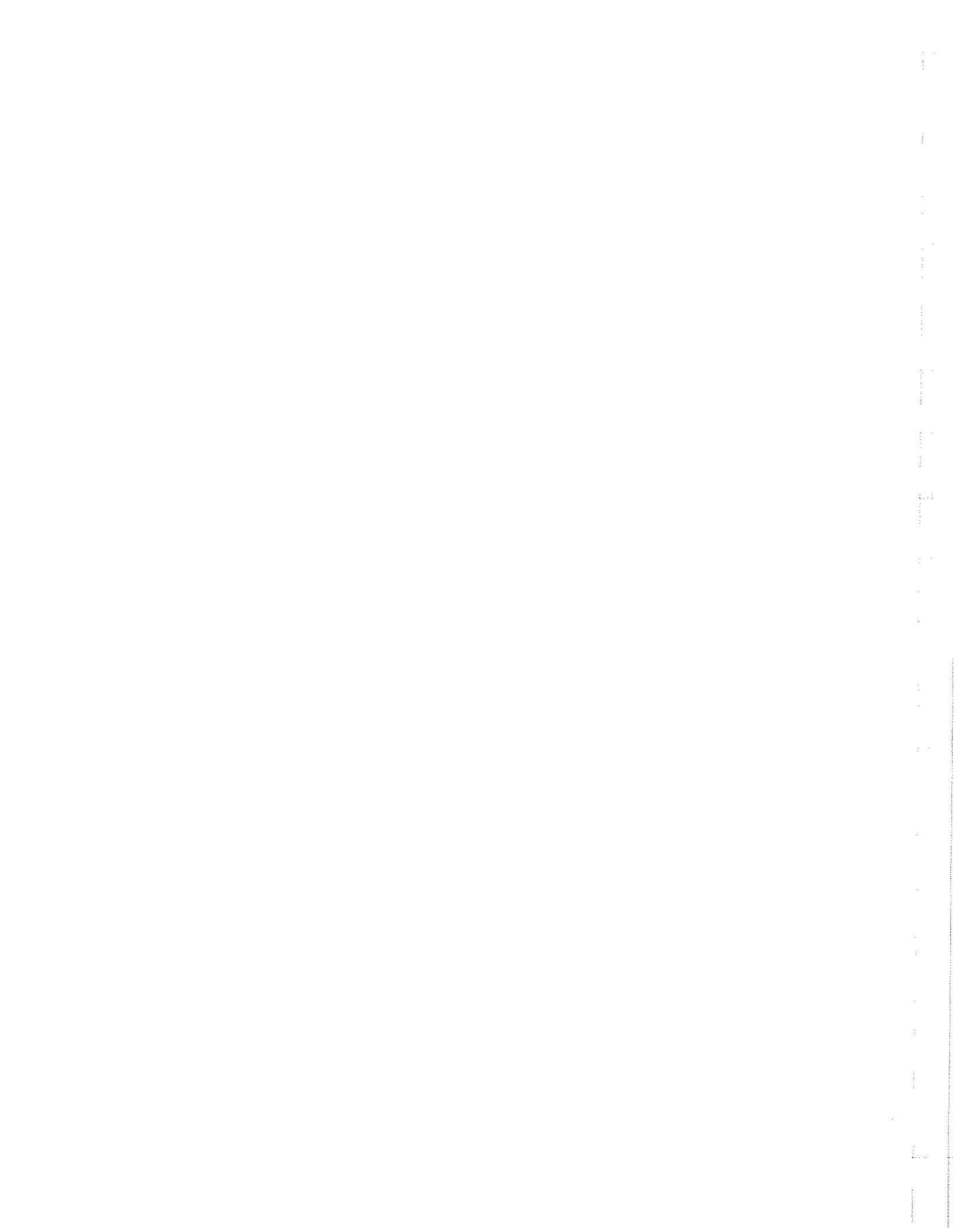
**C R E S U B M I T T A L #8**



**LOCATIONAL ALTERNATIVE No. 6**

**Eastern Urban Center**

**Figure 4-VII**



### Possible Locational Alternative 8 - Otay Lakes Overlook

This site was also eliminated from further analysis due to apparent significant biological constraints (vernal pools). An initial review also indicated other potential constraints, including possible archaeological resources, traffic, and visual quality.

### Alternatives Summary: Reduced Density, Modified Design Alternative 7

After reviewing the analyses conducted for all of the alternatives, it was concluded that the Midbayfront Development Plan would create reduced impacts in a different location, possibly in such areas as shown by Possible Locational Alternatives 2 and 6. It was also concluded that the elements of the Development Plan which, in most cases, produced the significant, unmitigable impacts, were the high density, large mass and extreme building heights. Thus, the project team created another alternative which reduces to a level below significant all but one of the significant unmitigable impacts (school transportation costs). This alternative, which is considered the environmentally preferred alternative, is discussed below.

#### Geology, Soils, Groundwater

This project could result in impacts similar to those from the proposed project, that is, ground settlement, seismic hazards, dewatering for subterranean parking, and on-site and off-site pipeline grading. This alternative would reduce the ground settlement impacts substantially by keeping development off large areas of compressible soils which are west of Marina Parkway. Portions of the 10-acre salt water lagoon and Lagoon Drive encroach onto existing compressible artificial fill soils. In addition, portions of the 10-acre salt water lagoon, ice rink and associated retail shops, tennis courts, and the 132-foot hotel encroach onto the compressible bay deposits comprising the northerly portion of the seasonal fresh water marsh. These materials are considered unsuitable in their present condition for direct support of the proposed improvements, resulting in potentially significant impacts. Feasible mitigation measures ~~are available to reduce all potentially significant impacts of the proposed project and this alternative are not yet available to a level below significant~~.

#### Hydrology/Water Quality

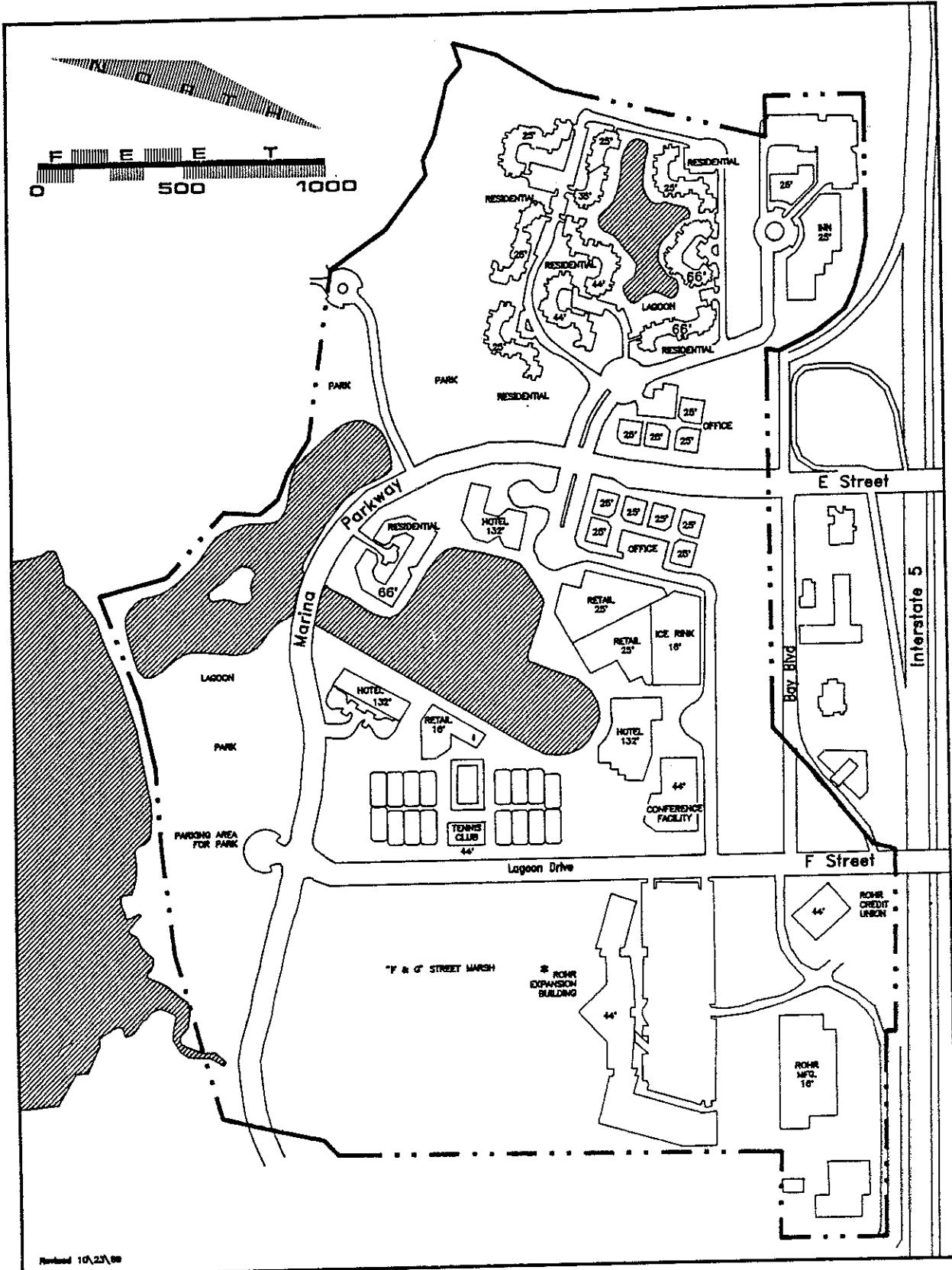
Hydrology and water quality impacts would be similar to those of the proposed project, though reduced due to the absence of development west of Marina Parkway adjacent to the bay. Also, this alternative assumes that the lagoons would be filled with San Diego Bay water, eliminating the groundwater impact to lagoons. Feasible mitigation measures ~~are available to reduce cited significant all other impacts to a level below significant are not yet available for both the project and the alternative~~.

#### Visual Aesthetics/Community Character

Alternative 7 would result in the same general types of aesthetic/visual effects discussed in Section 3.3 to the proposed project and alternative. With respect to degree of impacts, Alternative 7 is similar to Alternative 2, the Existing Certified LCP, since Alternative 7 is



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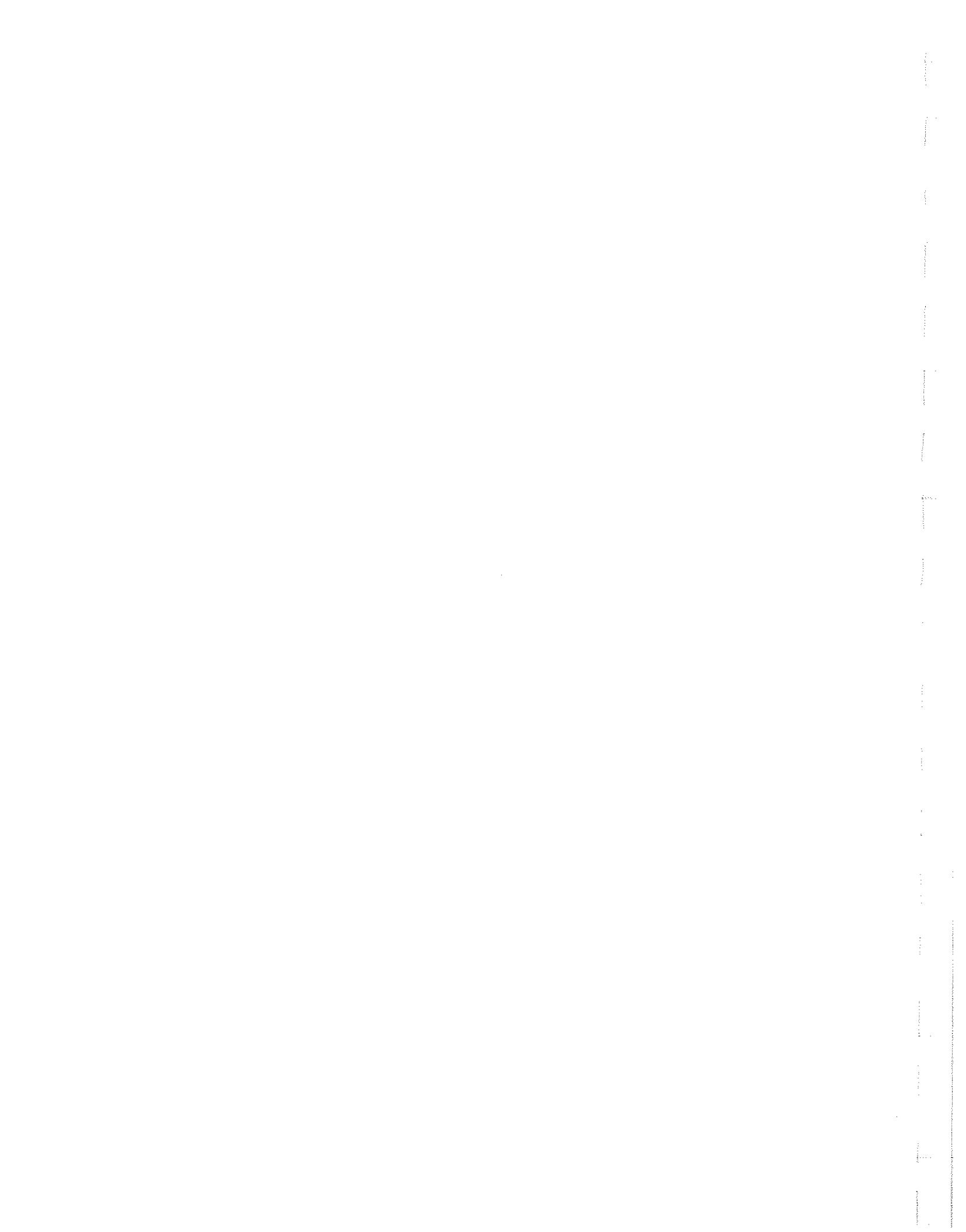


"Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan."

**ALTERNATIVE 7**

**REPRODUCED DENSITY 9**

Figure 4-VIII



generally in conformance with the height limits and development intensity allowed under the current LCP. In comparison to the proposed project, Alternative 7 would result in significantly reduced impacts to bayside views and to community character due to the reduced heights and densities that are proposed under this alternative as well as the relocation of taller buildings to a central site location, and the greater amount of public viewing opportunities that will be provided.

The visual/aesthetic effects of Alternative 7 building heights, mass and scale are shown on Plates 21 through 28. These plates show the Alternative 7 buildings from the Key Observation Points (KOPs) previously discussed in this EIR. Overall, this alternative will significantly reduce the visual dominance of the development from (1) the Chula Vista Interpretive Center, (2) "E" Street, and (3) I-5. With respect to the Chula Vista Nature Interpretive Center, Alternative 7 would not visually dominate the natural views provided at the Center for educational and scenic purposes. This alternative would also provide significantly increased opportunities for bay views from "E" Street and would not be visually dominant along I-5. The visual effects of this alternative would also be less in comparison to the proposed project along Bay Boulevard and along "F" Street (in vicinity of Woodlawn).

Most importantly, however, this alternative would ultimately provide greater on-site opportunities for the public to enjoy the aesthetic amenities of the City's bayside setting. In comparison to the proposed project, Alternative 7 provides for more public park lands along the bay as well as an increased potential for easy access to and parking at the bayfront.

With respect to the cumulative visual effects, Alternative 7 would create a multi-use development that would not contrast significantly in urban scale or community character with other bayside developments in the San Diego metropolitan region. As such, this alternative would not result in cumulative impacts to waterfront views. The alternative would also balance the desired urban and existing natural elements of the City of Chula Vista, by remaining within the established height limits of the existing LCP.

### **Conversion of Agricultural Lands**

This impact would be the same as the proposed project; that is, an incremental contribution to a regionally significant loss of agricultural lands to urban development would occur.

### **Air Quality**

Air quality impacts would be reduced by almost half due to the reduction in trips, and by possibly more than half due to the elimination of the co-generation facility. No significant air quality impacts would be expected, as this alternative would be consistent with the LCP and, thus, expected density and related emissions.

### **Noise**

Noise impacts would be reduced from the proposed project due to the reduction in traffic, however, project-related noise from the proposed project was cited to be less than

significant. Other noise impacts from traffic on I-5 can be feasibly mitigated for both the proposed project and this alternative.

## Biology

This alternative pulls development, other than parks, further back from the "E" Street Marsh and Vener Pond. Buildings at the northern edge of the site adjacent to the Sweetwater Marsh are substantially reduced in nature and have been designed in a meandering pattern for non-biological reasons. Parks within this alternative have been split to include passive recreation along a 200-foot minimum width corridor adjacent to the inner edge of the 100-foot wide refuge buffers (see Figure 4-IX). In the next interior portion of the site, active recreation parkland would be situated between the buildings and the passive parks. The lagoon concept has been expanded within the park and provides further buffering between active parks and the "E" Street Marshlands. The inner lagoon has also been expanded from all other alternatives. Designs around the "F" & "G" Street Marsh have not been modified substantially from those proposed under the other alternatives with the exception of the shifting of Marina Parkway to the west, allowing for more wetland creation adjacent to the existing wetlands. This change is considered a positive attribute of the project but does not result in significant changes to the impacts identified.

This concept provides considerable benefits in terms of buffering of marshlands which are not present in any of the other alternatives. Highly sensitive wetlands along the "E" Street Marsh, Vener Pond, and the Sweetwater Marsh are well separated from development features. Avian predation from buildings would be greatly reduced compared to all other designs, assuming all alternatives implement similar efforts to control predators and predator attractants. Pet and other mammalian predation factors remain a significant issue of concern. Further, under this alternative, the more extensive active use park is expected to result in higher levels of use and a corresponding increased difficulty in controlling human encroachment into sensitive areas. This increased access could be controlled through specific park design criteria, and like the previous alternatives, would be a significant but mitigable impact of this design alternative.

## Archaeology/History/Paleontology

The impact analysis is the same as for the proposed project; that is, no significant impacts would occur to archaeological/historical resources, and potentially significant and mitigable impacts could occur to paleontological resources.

## Land Use, General Plan Elements, Zoning

The alternative would reduce square footage from that proposed by the project by approximately 1.7 million square feet. The alternative proposes approximately 2.5 million s.f. which is allowed by the existing, adopted LCP. The densities of the alternative for each type of land use proposed are in the upper end of what is allowed, as well as what exists in the surrounding developments. The proposed project has an average density of 31,000 square feet per acre, whereas the alternative would have an average density of 19,000 square feet per acre. This alternative also proposes building heights which, for most structures,

range from one to two stories. Three 6-story residential structures, and three 12-story hotel are located largely in the central core (one 6-story is located in the northerly residential area). The existing adopted LCP allows one 12-story hotel on Gunpowder Point, which is now part of the NWR. This alternative transfers that height to this core area, however, three 12-story hotels would be built, two more than the LCP allows.

Heights for this alternative, though, are significantly below those of the proposed project, where most buildings exceed 3 stories, and numerous 15- to 26-story structures are proposed. The significant reduction in density, coupled with the reduction of proposed building heights, ~~would substantially reduce the significant land use compatibility impact to a level below significant. Nonetheless, because of the three 12-story towers in this location, this proposal remains inconsistent with the existing LCP.~~

### Community Social Factors

This alternative would be similar to that allowed by the existing LCP and General Plan, thus, no impacts would occur.

### Community Tax Structure

The analysis is similar to that for the proposed project, that is, additional money generated by development would go to the City's Redevelopment Agency, resulting in a positive impact to the City. ~~Money that presently goes to the County and school districts would no longer be received by these agencies, resulting in an incremental adverse impact to these agencies.~~

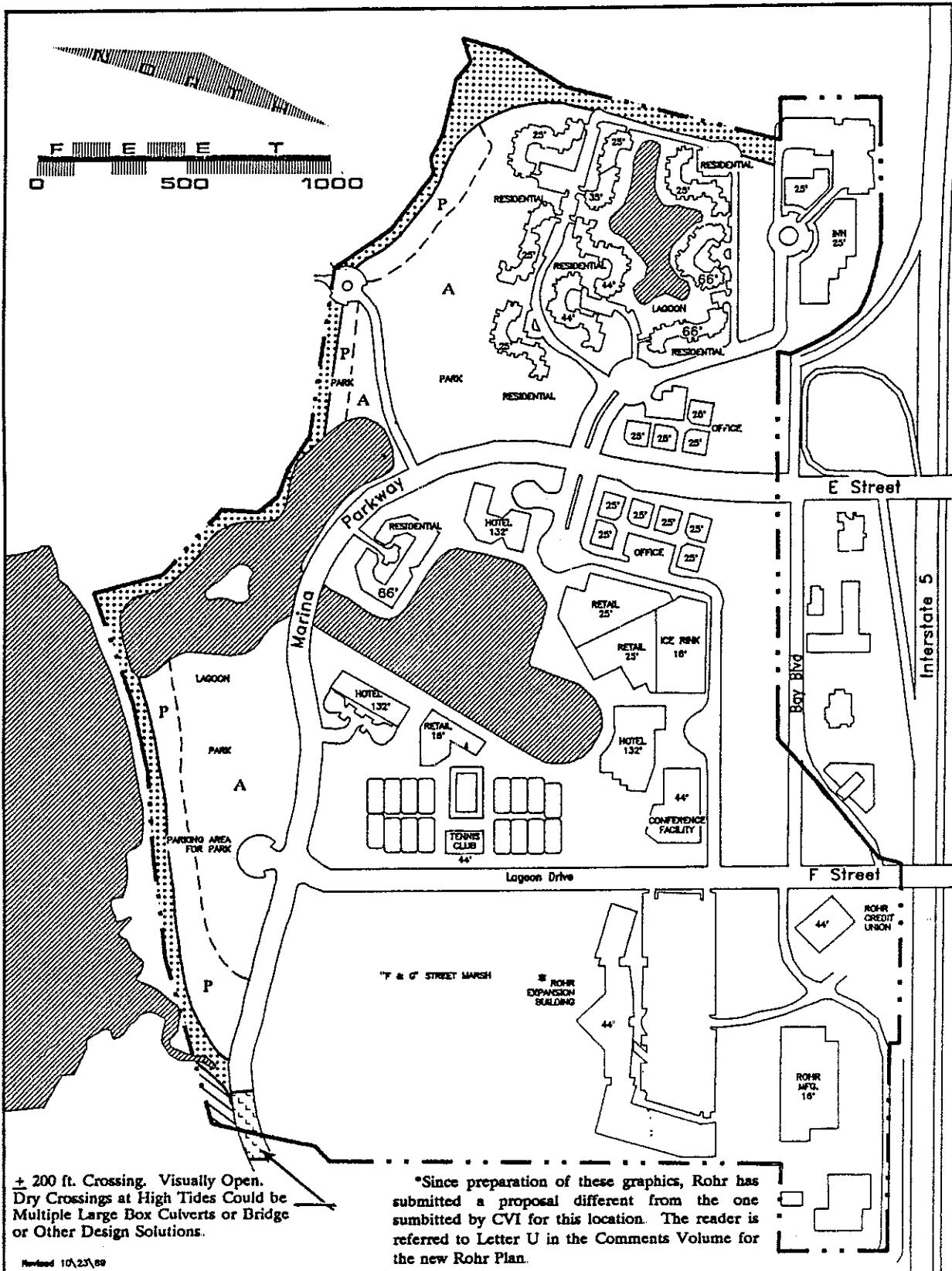
### Parks, Recreation, and Open Space

This alternative would develop 32.6 acres of parks, and 15.4 acres of the central public lagoon. This acreage is 10.1 ~~13~~ acres greater than that proposed for the project. Also, all of the parks would be contiguous west of Marina Parkway, and consistent with the mitigation measure for the project which calls for contiguous parkland west of Marina Parkway. A concept for use of parkland was designed in order to integrate park uses with adjacent sensitive biological features. This concept is shown on Figure 4-IX.

This alternative does not show all public parking and accessibility opportunities; thus, until these are designed, a potentially significant impact to public access is cited (same as project). Building heights are reduced in this alternative by at least half, reducing shadows significantly. Shadows from the three 12-story hotels for the critical evening hours would extend approximately 260 feet to the east in the summer and approximately 380 feet to the northeast in the winter. Summer evening shadows from the three 12-story hotels would cover buildings in two cases and a small portion of the core area in the other case. During the winter, shadows would cover roadways and parking in two cases, and a portion of the central lagoon in the other. Shadows would thus be significantly reduced from the proposed project and, by themselves, would not create significant impacts.



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Revised 10/23/89

\*Since preparation of these graphics, Rohr has submitted a proposal different from the one submitted by CVI for this location. The reader is referred to Letter U in the Comments Volume for the new Rohr Plan.

**A** Active

**■** Natural Open Space

**P** Passive

**■** Natural Open Space With Bicycle & Pedestrian Path

(No Volleyball, Kites, Frisbee Group Activities Resulting in Rapid Movements Scattered Picnic Tables)

**ALTERNATIVE 7a**

**PARK OPEN SPACE CONCEPT**

Figure 4-IX.



## Utility Service

### Gas and Electric

The alternative would require energy, and could be serviced by SDG&E. As with the proposed project, the energy demand is considered to be an incremental contribution to a cumulative impact to non-renewable energy resources. Incremental impacts can be mitigated by implementation of energy conserving construction materials and devices.

### Fire and Police

The alternative would require both police and fire service, though demand would be less than the proposed project due to the reduction in number of residences and in square footage (approximately one-half of the proposed project). There would ~~not~~ be ~~not~~ significant impacts anticipated to occur to police service. Even with the reductions, potentially significant impacts to fire service would occur due to the three high-rise (12-story) hotels requiring a ladder truck, and an additional two people anticipated to be required to service the new population. Mitigation measures would be necessary to reduce the fire-related impacts to a level below significant. These measures are the same as those for the proposed project.

### Solid Waste

The alternative would generate solid waste, approximately half of that anticipated for the proposed project. Impacts to the landfill would not be significant, but, this alternative, as with the proposed project, would incrementally contribute to the regionally significant impact to landfills. The incremental impact can be mitigated by implementation of a recycling program. Also, trash compactors installed in all buildings would reduce trash volume.

### Sewer

The alternative would generate approximately one-third to one-half of the sewage expected from the proposed project, which represents approximately 3 to 4.5 percent of the City of Chula Vista's remaining available capacity in the Metro system. This is not considered significant. Detailed infrastructure plans would be necessary to demonstrate adequate facilities and tie-ins to the existing system.

### Water

Sweetwater Authority would be able to serve the project area, thus, no service impacts would occur. The alternative would, however, incrementally contribute to the regionally significant demand on the Southwest's limited water resources.

The incremental impact could be mitigated by implementation of water conserving devices, the same as those suggested for the proposed project. Infrastructure plans must also be approved by the City's Engineering Department.

## **Schools**

The alternative would generate approximately one-third the number of students than is expected for the proposed project. Because of the existing capacity problems at the schools, this project would also create significant impacts to overcrowding. Entering into a Mello-Roos agreement, or paying standard school fees (appropriate mitigation determined by Districts), would mitigate this impact. As with the proposed project, no financing mechanism exists to mitigate the school transportation costs impact, and this potential impact remains significant.

## **Transportation/Access**

This alternative analysis is similar to that for Alternative 5 (Reduced Density 2). The levels-of-service at all of the key intersections analyzed would be C, with the exception of the intersection at the "E" Street/Marina Parkway intersection with the I-5 southbound ramp, which would be level-of-service D. This is considered a potentially significant impact, which, at this time, cannot be mitigated due to an absence of feasible mitigation measures.

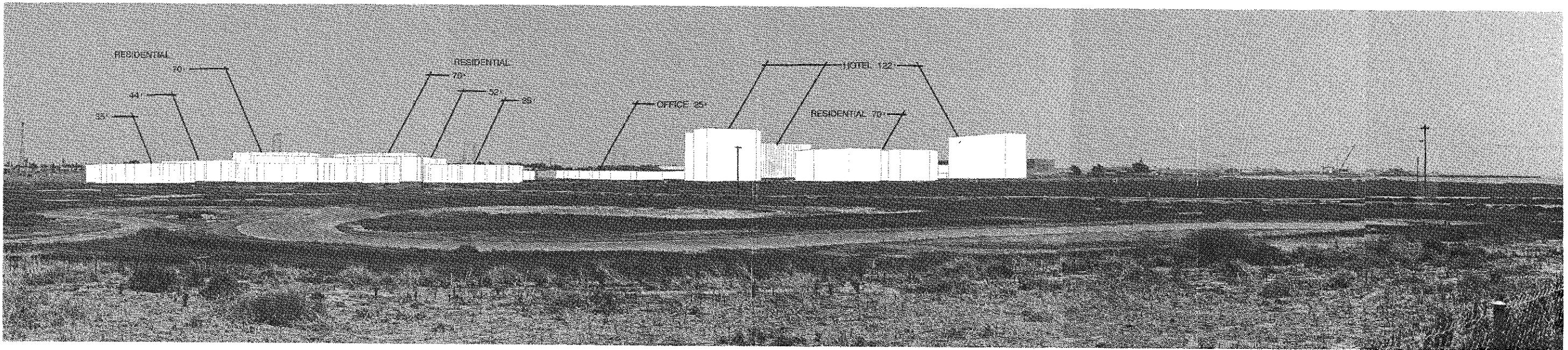
### **Alternative 8 - Applicant's Revised Development Plan**

At the close of the public review period on the Draft EIR, (public hearing on DEIR, September 26, 1990), the applicant presented a revised development plan. This plan is described in the Draft EIR, Volume I, Section 4.1, followed by a discussion of impacts.

### **Alternative 9 - Alternative Developed In Response To Public Comments**

A number of public comments suggested various types of redesigns to further reduce impacts over those reported for the proposed project or Alternative 7. Alternative 9 incorporates redesign concepts, where feasible. Alternative 9 is described in Volume I, Section 5.0.

**RENDERING SUBMITTAL #8**

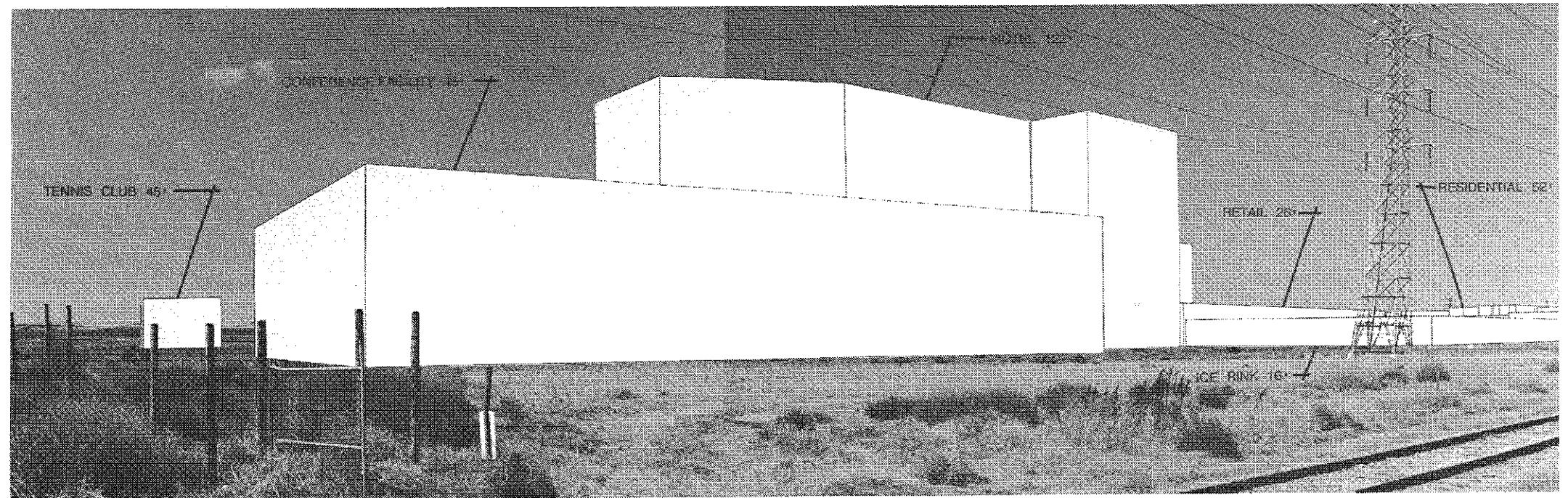


**ALTERNATIVE 7**

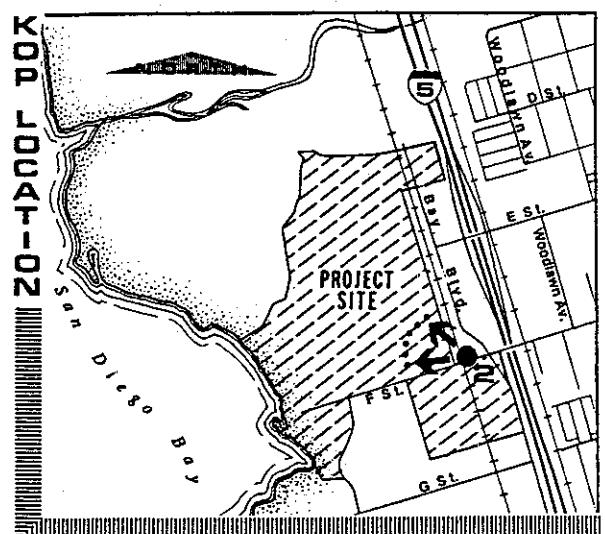




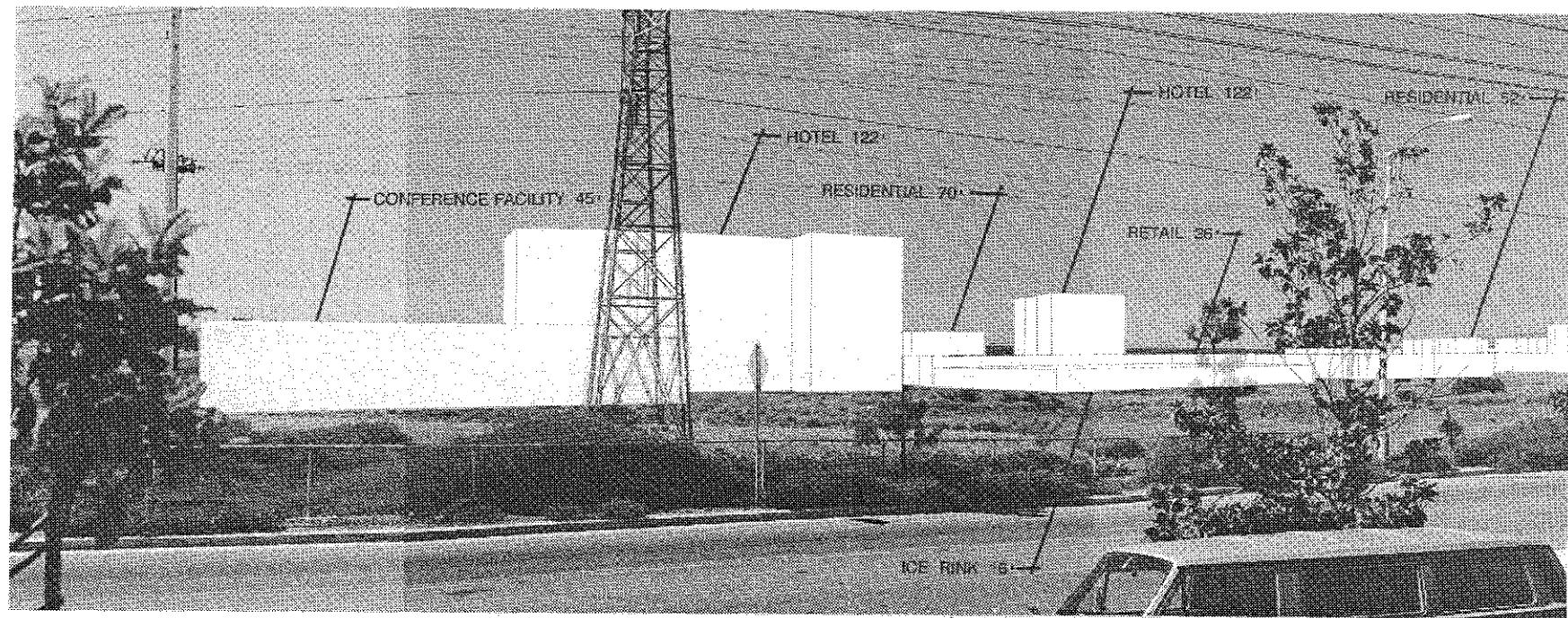
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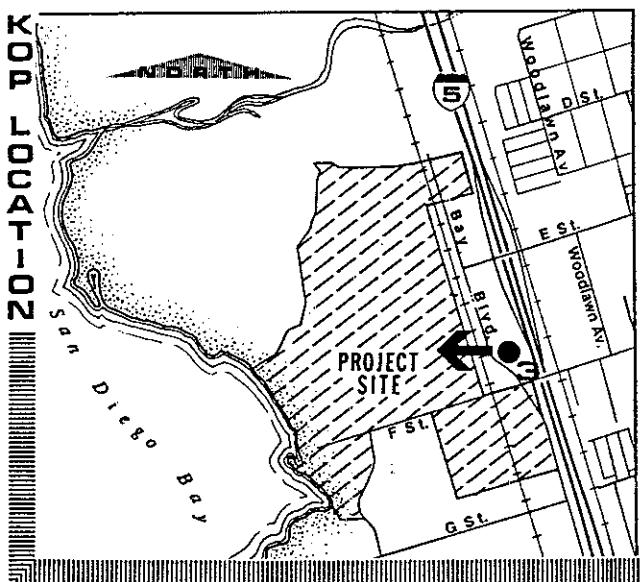
**ALTERNATIVE 7**



CORRESPONDENCE  
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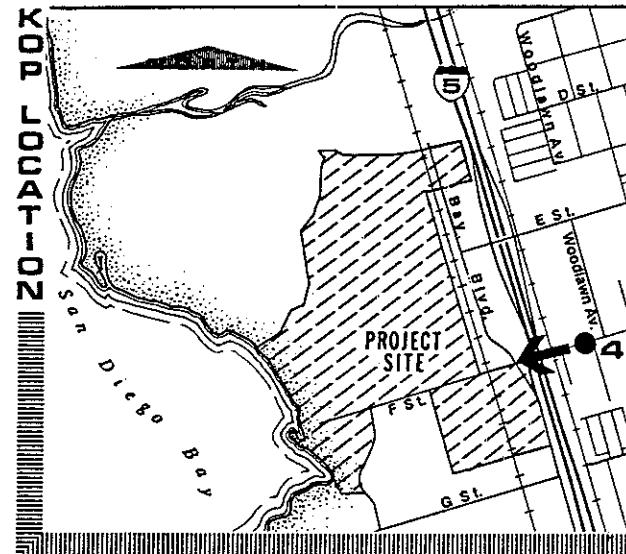
**ALTERNATIVE 7**



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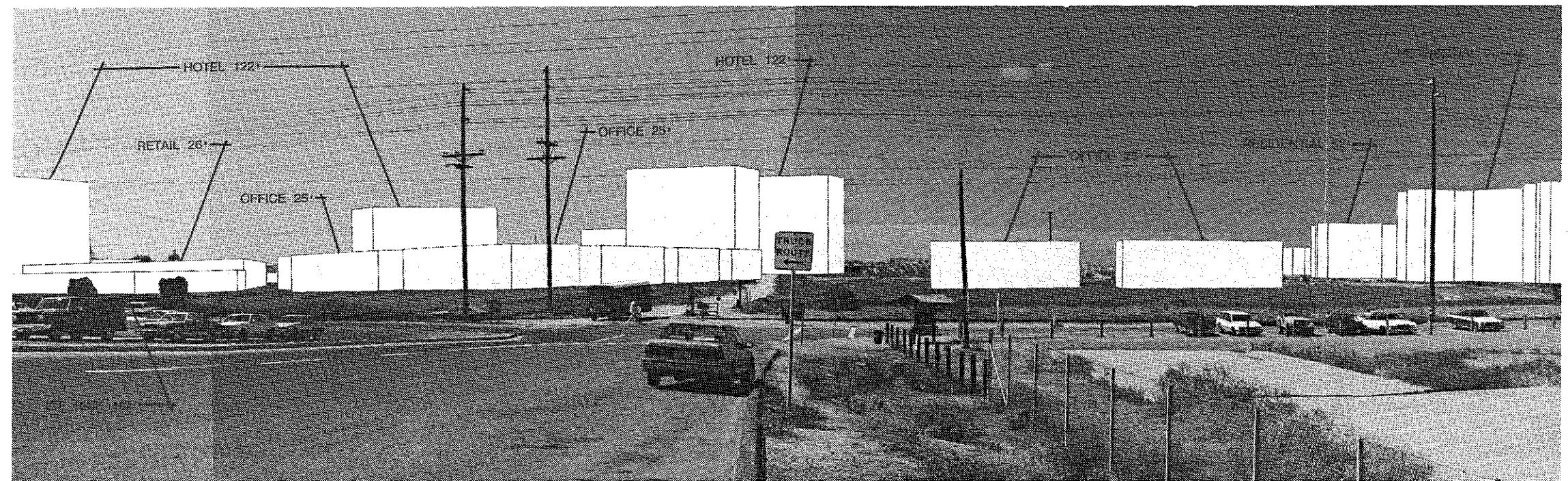


## **ALTERNATIVE 7**

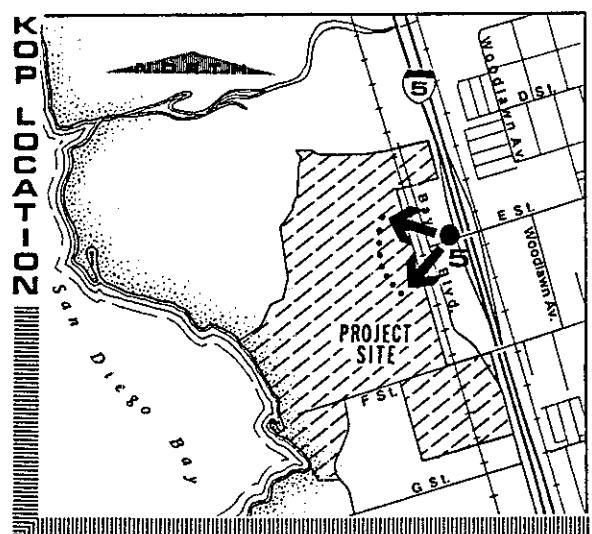


**KOB** 4  
**PLATE 24**

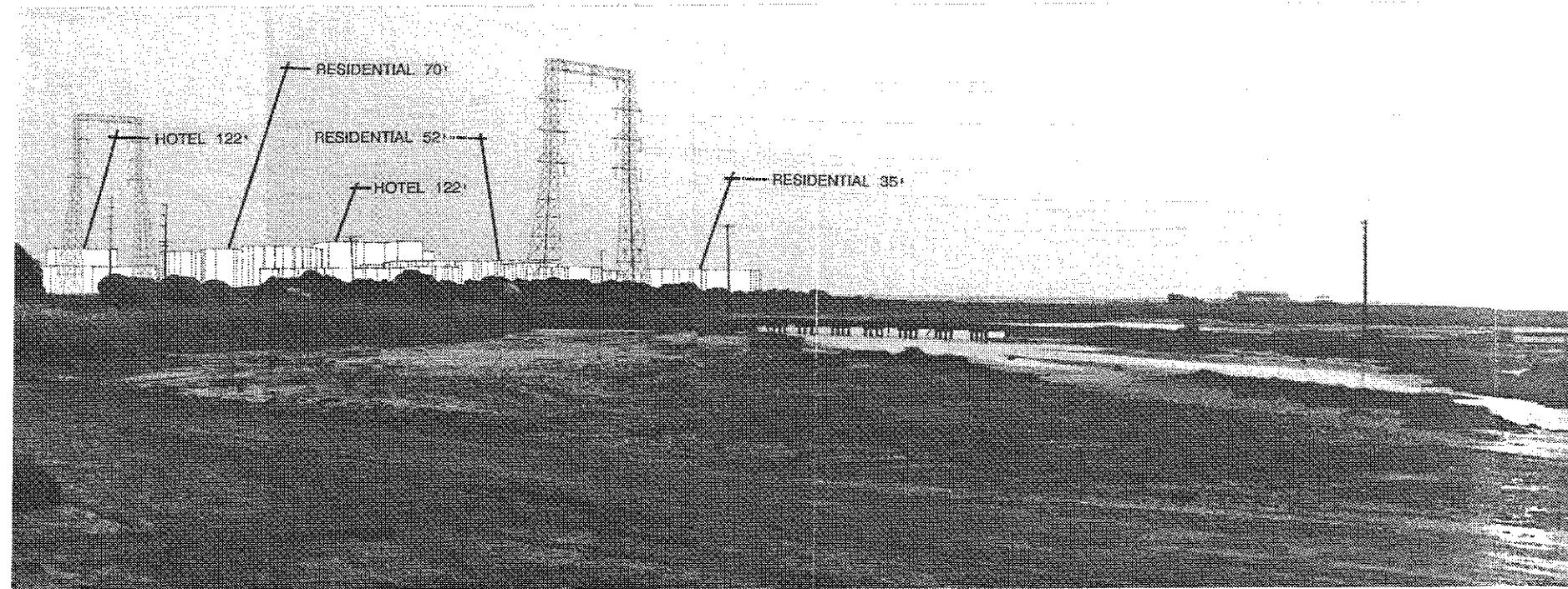
LIC SUBMITTAL #8



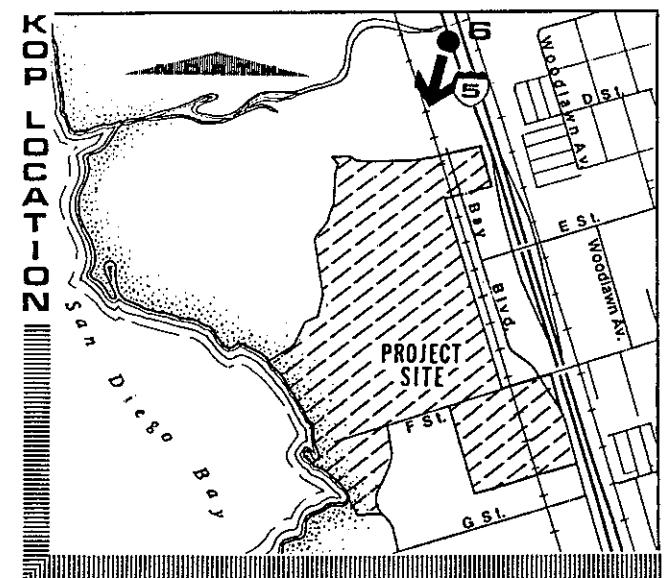
**ALTERNATIVE 7**



**LUR RESUBMITTAL #8**



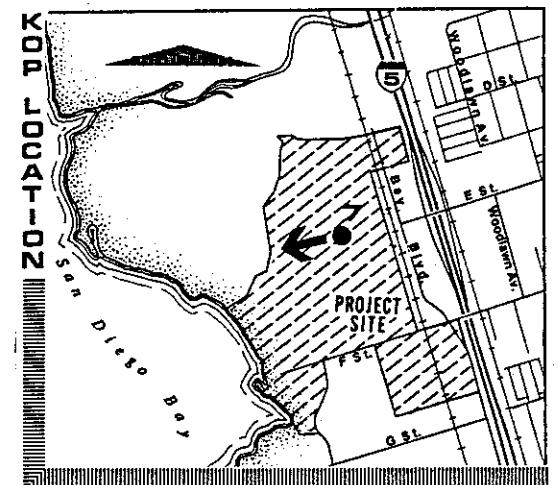
**ALTERNATIVE 7**



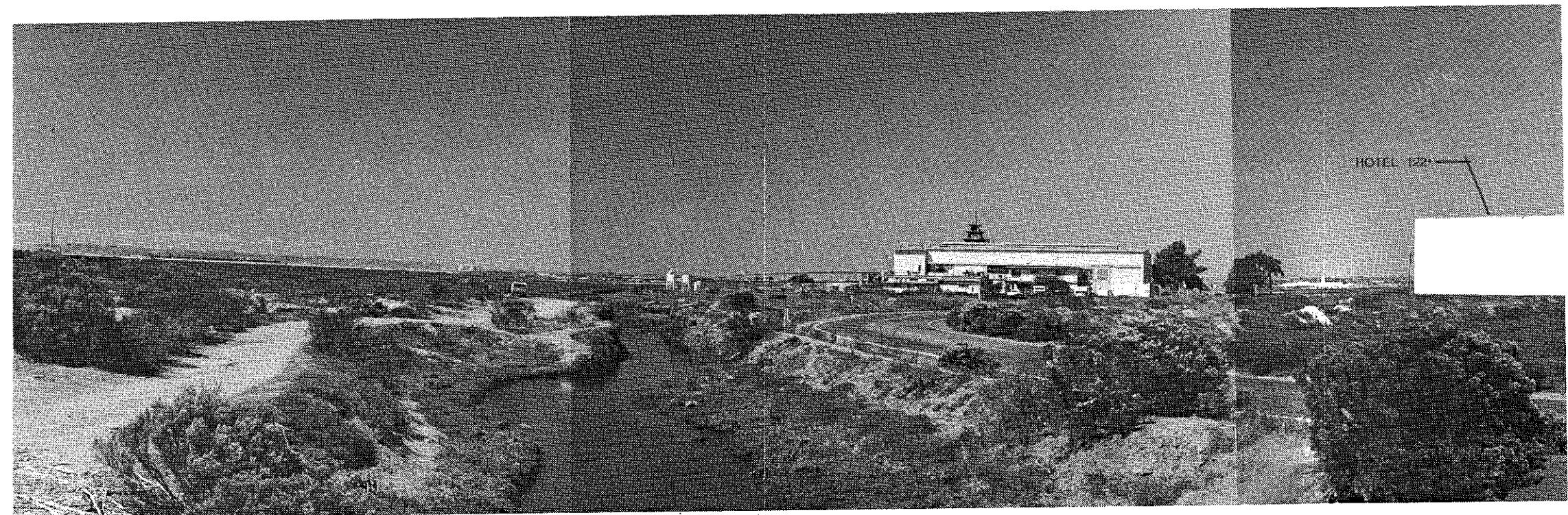
KOP SUBMITTAL #8



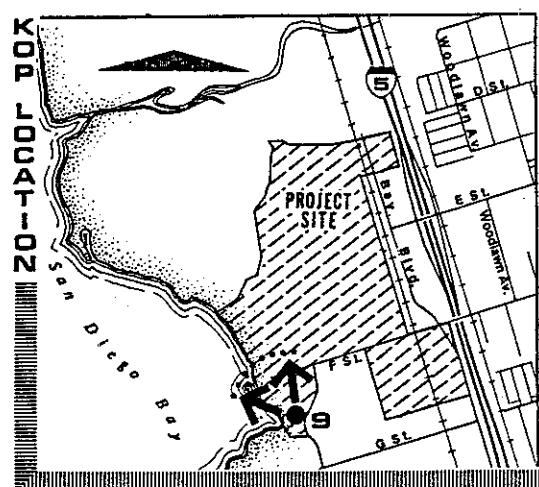
**ALTERNATIVE 7**



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RESUBMITTAL #8



ALTERNATIVE 7



## **5.0 UNAVOIDABLE SIGNIFICANT IMPACTS**

Table 2-1 in Section 2.0 of this report summarizes impacts and their level of significance. As shown, impacts to Visual Aesthetics, Wildlife Resources, Land Use/General Plan Elements, Shadows (shade) in public areas, School Transportation Costs and Traffic Circulation remain significant even with mitigation, or because mitigation for reduction to a level below significant would require a redesign of the project. The major project characteristics which create the unavoidable significant impacts are the building heights which, at a maximum, exceed City requirements by 14 stories; and the project density, which exceeds the City plan for this area by 1.7 million square feet (assuming the existing maximum allowable density). These impacts could be substantially reduced or eliminated by a project redesign to reduce density and building heights to acceptable levels, and by creating a design sensitive to the adjacent NWR and to public views.



## **6.0 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

Projects which accommodate the unavoidable significant impacts of development and enhance quality of life for the community also improve the overall regional environment. Economic and social pressures for growth in San Diego County are such that complete protection of the environment at the expense of community growth and well-being is not feasible. Therefore, a balance must be sought that accommodates the needs of the growing population of the southern California region, while maintaining the integrity of the environment. It is the degree to which this balance is achieved in a given development that establishes the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity.

Development of the proposed project or any of the alternatives would intensify the uses of the environment, while the maintenance of the area as a valuable natural resource would ensure its long term productivity. The valuable natural resources include the unique marine and wetland-associated habitats and species, and the proximity of the open spaces to the waters of the San Diego Bay and the associated aesthetic pleasures.

It is important that site development respect the natural resources so that these resources are protected in their healthy condition for the future. In order to achieve this balance then, the measures recommended to mitigate impacts to these resources, including project redesign to a lesser density, should be implemented and monitored to ensure their appropriateness and success.



## **7.0 IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WILL RESULT FROM THE PROPOSED PROJECT**

Approval and eventual implementation of the proposed LCPR No. 8 and associated Development Plan would result in significant irreversible changes to the Chula Vista bayfront character and environmental resource setting. The proposed project would eliminate, change and/or intensify many existing noticeable area components: land uses would be created at a high intensity where none now exist, increasing traffic and noise, impacting biological resources, reducing aesthetic amenities, and increasing demand on public services and utilities. Housing, employment, City and County monies from taxes, and park and recreation opportunities would also be increased. The potential for agricultural production would be eliminated, though it is not expected that this use would ever occur again on the site.



## **8.0 GROWTH INDUCING IMPACT OF THE PROPOSED PROJECT**

The Chula Vista Sphere of Influence area is within one of the fastest growing areas in the County. In fact, the population of the sphere of influence is expected to increase approximately 65 percent by the year 2010 (SANDAG, Series 7 Population Forecast), whereas the San Diego Region's increase is expected to be 45 percent. The City's General Plan Update estimates that by 2010, over half of the City's population will be living in newly developed communities located on the mesas and foothills east of I-805. The City's Growth Management Policy (General Plan, 1970) indicates that the location and quality of growth should be reviewed annually by City staff to ensure orderly growth and development of the planning area. The City's intent is for growth to occur in a general west to east direction.

Numerous development projects are planned or under construction in the City's Sphere of Influence. One concern of growth management is that development occur adjacent to existing development, rather than in a "leap-frog" fashion. The proposed project is located adjacent to a variety of existing land uses to the north, east and south, and any additional growth would not be possible. Thus, this "leap-frog" phenomenon would not be created by development of the project. Another gauge of premature growth is the necessity to extend services and facilities. Facilities and services are already in place on or adjacent to the project site, though there would be modifications to and increases in service demand.

The proposed project would allow for a significantly greater density of development than is planned for the site under the existing City plans. In this respect, the project would result in significantly higher levels of growth at the site, and possibly in the surrounding bayfront areas because of the precedent set by the project (if approved).



## **9.0 CUMULATIVE IMPACTS**

This section provides a summary of potential cumulative impacts. Cumulative impacts "shall be discussed when they are significant" (CEQA Guidelines, Section 15130(a)). It was found that potentially significant cumulative impacts could occur from "two or more individual effects (of the project) which, when considered together, are considerable..." (CEQA, Section 15355). Also, it was found that potentially significant cumulative impacts could occur if this project were approved, which could result in incentive for surrounding bayfront properties to intensify existing developments. Cumulative impacts may be defined as environmental changes resulting from a single project (Midbayfront) or a number of separate projects. As defined in CEOA Guidelines, Section 15355(b):

The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Thus, the following cumulative impact discussion addresses: (1) cumulative environmental effects of the Midbayfront Project alone (i.e., environmental consequences when all documented project impacts are considered collectively); and (2) environmental effects on a more regional scale, considering other bayfront projects in the South Bay area that may incrementally impact one or more environmental resources. For purposes of this analysis, a regional overview is discussed first, followed by a description of the Midbayfront cumulative effects, both as they relate to on-site cumulative impacts and as they contribute to regional effects.

### **REGIONAL BAYFRONT PROJECTS**

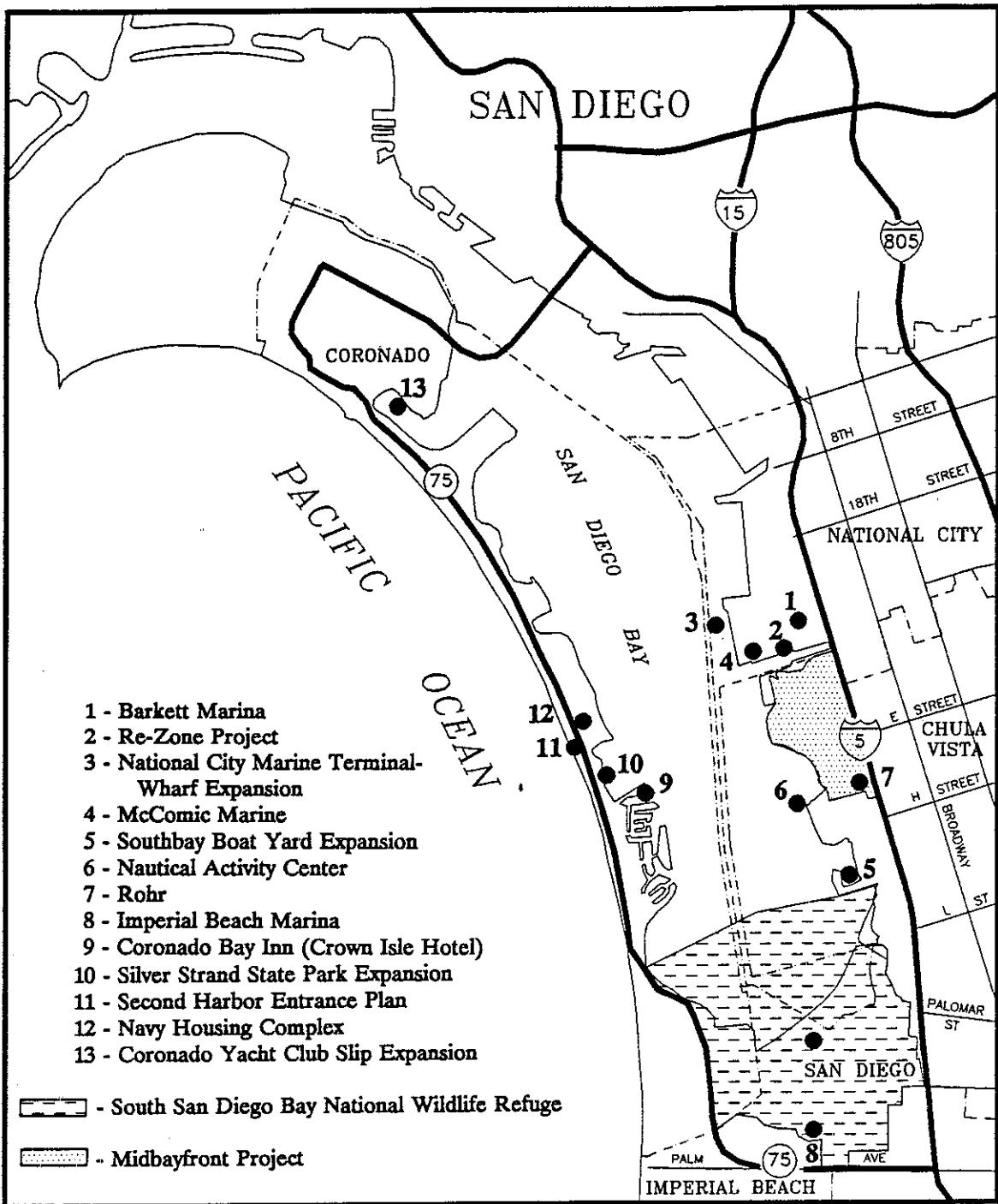
The proposed Midbayfront project is only one of many development projects being proposed or already approved in the South Bay bayfront region. In order to address cumulative environmental impacts from similar type projects, all bayfront development projects within a reasonable distance from the proposed project known to date were identified. As shown on Figure 9-1, the study area for cumulative projects includes bayfront land from the Coronado Bay Bridge south to Imperial Beach and east along the Silver Strand. Projects proposed within this area were assumed to result in similar types of bayfront impacts as the proposed project.

Table 9-1 provides the project name, corresponding locational number keyed to Figure 9-1, status, and jurisdiction or lead agency identification. The list provided in Table 9-1 is the most recent and up to date list as of November 30, 1990 per communication with the cities of National City, Chula Vista, Imperial Beach and Coronado, the San Diego Unified Port District (SDUPD), the U.S. Navy and State Department of Parks and Recreation.

The projects listed in Table 9-1, along with the proposed project, are considered collectively to determine potential cumulative environmental effects. The proposed, planned or approved projects identified in Table 9-1 are described below individually. Additional



JURISDICTIONAL  
SUBMITTAL #8



CUMULATIVE PROJECTS  
LOCATION MAP

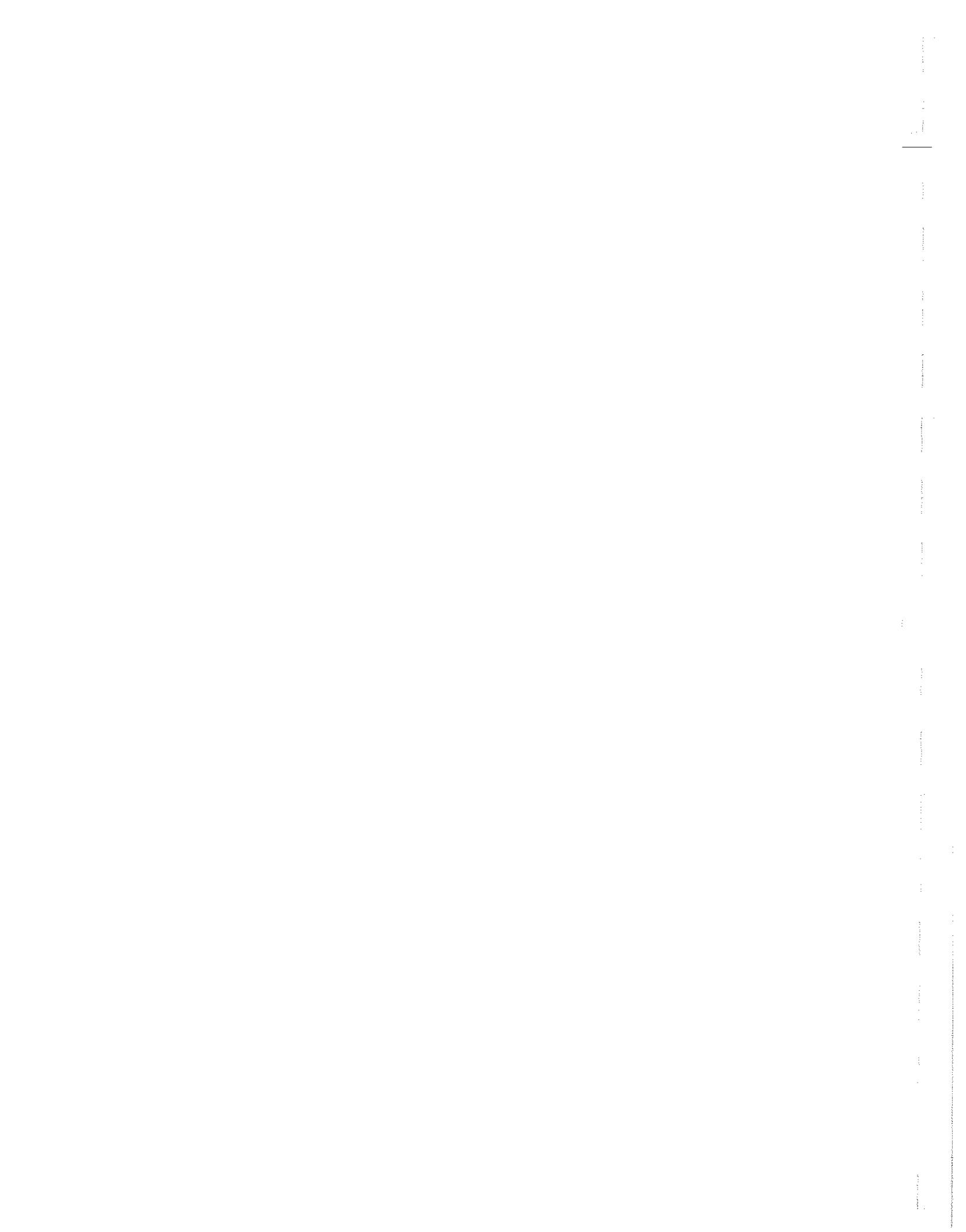
Figure 9-I



**Table 9-1**  
**Cumulative Projects List**

| <b>Map<br/>Key<br/>#</b> | <b>Project Name</b>                              | <b>Status</b>              | <b>Location</b>            | <b>Lead Agency</b>                   |
|--------------------------|--------------------------------------------------|----------------------------|----------------------------|--------------------------------------|
| 1                        | Barkett Marina                                   | Proposed/<br>Not Approved  | National City              | National City/<br>SDUPD <sup>a</sup> |
| 2                        | Re-Zone Project                                  | Proposed/<br>Not Approved  | National City              | SDUPD                                |
| 3                        | National City Marine<br>Terminal-Wharf Expansion | Proposed                   | National City              | SDUPD                                |
| 4                        | McComic Marine                                   | Proposed                   | National City              | SDUPD                                |
| 5                        | South Bay Boatyard<br>Expansion                  | Under<br>Construction      | Chula Vista                | SDUPD                                |
| 6                        | Nautical Activity<br>Center                      | Proposed                   | Chula Vista                | SDUPD                                |
| 7                        | Rohr Office Complex                              | Proposed                   | Chula Vista                | Chula Vista                          |
| 8                        | Imperial Beach Marina                            | Conceptual/<br>No Proposal | Imperial Beach             | SDUPD                                |
| 9                        | Coronado Bay Inn<br>(Crown Isle Hotel)           | Under<br>Construction      | Coronado-<br>Silver Strand | SDUPD                                |
| 10                       | Silver Strand State<br>Park Expansion            | Approved                   | Coronado-<br>Silver Strand | ?                                    |
| 11                       | Second Harbor<br>Entrance Plan                   | Conceptual                 | Coronado-<br>Silver Strand | SDUPD                                |
| 12                       | U.S. Navy Housing                                | Constructed                | Coronado-<br>Silver Strand | U.S. Navy                            |
| 13                       | Coronado Yacht<br>Club Expansion                 | Planned                    | Coronado                   | Coronado                             |
| 14                       | National Wildlife<br>Refuge                      | Proposed                   | South San Diego Bay        | USFWS                                |

a San Diego Unified Port District



projects that were discovered but found to be either void, on hold, or to have little environmental impact are also addressed briefly.

### Barkett Marina and Re-Zone Project

The City of National City and the SDUPD have considered future improvements to the National City bayfront area. Two proposals for the bayfront that should be considered in this cumulative analysis include the Barkett Marina and the Re-Zoning of bay area property. The proposed Barkett "Paradise Creek" marina project includes a 250 slip marina, and a hotel and related tourist/commercial activities to be located to the north of the Sweetwater River Flood Control Channel, west of I-5 and to the east of Tidelands Avenue. An extension of Harrison Avenue is proposed to provide improved access to the site. The project will require extensive excavation of existing fill in order to construct the marina. Environmental, economic and engineering feasibility studies have been conducted for the site; however, at this time no further action has been taken by the applicant to proceed with this project. In addition to the marina, a proposal by the City Council of the City of National City involves a re-zone to "CT" (Commercial/Tourist) land adjacent to the Sweetwater River Flood Control Channel on the north side. This proposal is conceptual at this time, with no action taken by the SDUPD as lead agency and no environmental documentation has been prepared.

### National City Marine Terminal - Wharf Expansion

The SDUPD is currently discussing a potential wharf expansion along the 24th Street Marine Terminal in National City. The existing wharf is located along the bayfront west of Terminal Avenue, generally between 24th Street and 32nd Street. Design work has not begun and no environmental analysis has been conducted. The proposal is solely conceptual at this time.

### McComic Marine

The McComic Marine project is located west of Terminal Avenue along the Sweetwater Channel in National City. McComic Marine Corporation proposes to develop Mariner's Park on the former 20-acre ITT plant site. Mariner's Park is proposed to be a shared use marine manufacturing complex for boat and yacht manufacturers, marine suppliers, and ancillary marine manufacturers and service companies. Mariner's Park expects to host one or more America's Cup syndicates (for 1991-1992) during its initial period of operation, and over the long-term will provide facilities for all facets of marine manufacturing. The proposed project consists of utilizing the existing 290,000 square-foot ITT structure for boat manufacturing and office uses, paving surrounding disturbed areas, development of a travel lift and boat basin, and construction of a new dock for commissioning boats. The travel lift and associated boat launch basin are proposed on the west side of the existing building, and approximately 200 feet of dock is proposed. No significant structural improvements are proposed for the existing structure. The applicant is currently coordinating with the SDUPD and is preparing required environmental documentation. To date, the applicant has not yet gained clearance to begin construction. Potential environmental issues include impacts to eelgrass beds, channel dredging and excavation impacts to the bay, air quality effects from

boat repair and painting operations, and least tern predator facilitation from the travel lift. The applicant is currently working with all effected agencies (e.g., U.S. ACOE, USFWS, APCD, RWQCB) to gain approval, apply for permits, and implement appropriate mitigation measures.

### **South Bay Boatyard Expansion**

The South Bay Boatyard Redevelopment Project is characterized by the addition of a marine recreational craft storage, berthing and repair facility to an existing marine-oriented industrial shipyard. The South Bay Boatyard is located at the foot of "G" Street on 7.9 acres with 1.4 acres of water (surface area) associated with the site. The project includes dredging of approximately 44,500-cubic yards of material, construction of a 1,665 foot long concrete sheet-wall wave attenuation system along the boat basin, construction of two 70-foot long/12-foot wide support piers to accommodate a 100-ton travellift, and construction of 97 berthing slips. In addition, a parking area and four single-story buildings are planned for shipyard, recreational, and sublessee activities. The project has been issued a Negative Declaration (SDUPD doct. # 17522 Readopt. N.D. Oct. 30, 1984) by the SDUPD and is currently under construction. All impacts will be mitigated to a level that is less than significant, according to the SDUPD. An EIR was not required.

### **Nautical Activity Center**

The City of Chula Vista has proposed a recreation facility at the foot of "G" Street in Chula Vista. The Nautical Activity Center is intended to be used for classes on aquatic-type activities only. The activity center would require dry land and bay improvements, including a 7,800 to 13,000 square foot building and a 300-foot long floating dock. The project would require dredging of approximately 6,000 cubic yards of mudflat as well as piles associated with the dock. The SDUPD, the lead agency for the project, is currently considering the center. A 60 percent Feasibility Study has been submitted to the Port for review; however, it is not approved for publication to date. The 30 percent Feasibility Study identified active sport instruction for such activities as sailing, windsurfing, kayaking, canoeing, sweep-rowing, and sculling. Potential youth functions could include aquatic day camps for youth clubs such as Boy Scouts, Girl Scouts, Campfire Girls, etc. Although an environmental feasibility study has not yet been conducted, potential issues include impacts to eelgrass, mudflats, and other dredging related effects. Once the 100 percent Feasibility Study is submitted, the environmental studies will be initiated. The project will require an environmental assessment and may require an EIR.

### **Rohr Office Complex**

Rohr Industries, Inc., is proposing development of an 11.6 acre parcel with an office complex. The project site is located in the City of Chula Vista, east of San Diego Bay, west of Interstate 5 (I-5), south of "F" Street (Lagoon Drive), and north of existing Rohr facilities. The "F" & "G" Street Marsh, a component of the Sweetwater Marsh National Wildlife Refuge (NWR), is contiguous with the western property boundary. The NWR is considered a sensitive estuarine environment, as it provides habitat for many types of plants and animal species, including species listed as endangered by state and federal agencies. The site is

currently undeveloped, but has historically been used for agriculture. In conjunction with an office complex, "F" Street would be improved to a Class I collector street as designated in the Chula Vista General Plan, and a drainage system would be installed to convey site drainage away from the "F" & "G" Street Marsh. The proposed office building would contain a maximum of 245,000 square feet (gross) floor area with a 0.48 floor area ratio. The building height (currently planned for 42 feet) would not exceed 44 feet and would be placed on the western portion of the site. The majority of the site (11.2 acres) would be developed with the proposed building, parking and landscaping; a 0.4 acre marsh area would remain undisturbed. The Final Environmental Impact Report has been certified by the City of Chula Vista. Environmental issues associated with this project include potential urban runoff impacts to the "F" & "G" Street Marsh, changed drainage patterns that may affect the marsh's primary watershed source, impacts to the brackish water marsh and willow riparian grove due to potential surface and groundwater changes, elimination of fallow agricultural fields currently used for raptor foraging, and potential impacts to the light-footed clapper rail and Belding's savannah sparrow presently occupying the "F" & "G" Street Marsh. For the most part, these potential impacts, and others, can be mitigated to a level that is less than significant as stated in the EIR.

#### Imperial Beach Marina

A marina for the City of Imperial Beach has been proposed for the bayfront along the northern edge of the Otay River and opposite Imperial Beach city shops. Development of a marina in this location would require extensive dredging for a channel leading to the marina due to the shallow water depth of south San Diego Bay. The wetland habitat of south San Diego Bay could be impacted by the marina due to the length of the proposed channel and related construction activities. The proposed Imperial Beach Marina has been the subject of a feasibility study under direction of the SDUPD; however, no further action has been taken. In addition to anticipated biological impacts, development of this project would conflict with the U.S. Fish & Wildlife Service's (USFWS) proposal for a National Wildlife Refuge for south San Diego Bay. The refuge would cover approximately 2,500 acres of water area, and if implemented would preclude any bay improvements for nautical activities (see the Refuge discussion).

#### Coronado Bay Inn

The Coronado Bay Inn/Crown Isle Hotel project is a 450 room resort hotel with a 97 slip marina and various retail, restaurant, recreational and conference facilities included within the hotel complex. The project occupies Crown Isle on the Coronado Silver Strand, north of the Coronado Cays residential development. The Crown Isle site is a 12.9 acre artificial peninsula created by dredging (prior to the Coastal Act), along with 4.1 acres of San Diego Bay. The Coronado Bay Inn/Crown Isle Hotel project has undergone extensive review with the SDUPD as lead agency, and is currently in the construction phase (SDUPD doct. # 20236 FEIR approved 1/6/87).

### Silver Strand State Park

The State Department of Parks and Recreation is currently processing expansion of facilities to include a bayside campground at Silver Strand State Park. The bayside campground is to be located on Crown Cove, north of the existing day use bayside facilities. The campground covers 40 acres and includes 189 campsites for self-contained recreational vehicles, additional tent, group, and bicycle campsites for 140 people, several buildings and day use parking for 60-70 people. Currently, the campground project does not include any aquatic improvements; however, a small marina/boat launch area has been proposed for future consideration. The bayside campground project has been through environmental review and will tentatively be under construction in early 1991 (proposed aquatic improvements excluded).

### Second Harbor Entrance Plan

The Second Harbor Entrance Plan (SHEP) is a proposed project that has a long history of interest and numerous studies. The project is defined as a second harbor entrance cut into the Silver Strand peninsula along the northern boundary of Silver Strand State Beach. The project would alleviate the long haul to the northern harbor entrance for many vessels originating in National City, Chula Vista and Coronado Cays. The project has never gone through a formal proposal, or environmental evaluation phase; however, a number of studies have been, and are currently being, prepared to determine the engineering feasibility of such a channel. Current studies are being conducted by the Port of San Diego and include a sand distribution evaluation and a geophysical bearing capacity study to determine the potential for tunneling. The project is controversial for a number of reasons, including potential tidal action impacts, marine biological effects and biological conflict with the proposed 2,500+ acre National Wildlife Refuge proposed by the USFWS. The project is conceptual only and will require full environmental documentation should the proposal become formalized.

### Silver Strand Navy Housing

The U.S. Navy has recently completed construction of 180, two-story multi-family dwelling units. The structures are located north of Silver Strand State Beach and south of the U.S. Naval Amphibious Base. An Environmental Assessment was prepared for the project under the direction of the Navy. Improvements were carried out on dry land only; no dredging or significant bay impacts occurred.

### Coronado Yacht Club Slip Expansion

The Coronado Yacht Club Slip Expansion project is proposed to create 42 new slips on a 630 foot dock expansion of an existing sea-dock. The dock expansion will occur in the eastern portion of the yacht club in Glorietta Bay and border on the Coronado Golf Course to the east. The project has been granted a Coastal Permit and the SDUPD, as the lead agency, has tentatively envisioned construction for early 1991 pending final processing and approval of the project.

### National Wildlife Refuge

The USFWS has proposed a 2,500 acre Refuge in the south San Diego Bay area, as indicated on Figure 9-1. The Refuge would be managed by the USFWS and would preclude any nautical activities or associated improvements (docks, marinas, etc.). The USFWS is presently coordinating with the SDUPD, U.S. Navy and Western Salt (Fenton Materials Company) to secure this refuge. The project is in the proposal stage only and will require extensive negotiating between all affected agencies and land holders. The project, if approved and implemented, would have numerous ramifications for south bay development. The project would have positive environmental effects as it would preserve existing tidal wetlands and associated sensitive species.

### Other Projects

In addition to the projects listed in Table 9-1, several improvement/development projects have been proposed in the south bay area that (1) are either no longer being considered by the lead agency or proposed by the applicant, or (2) will not result in significant impacts of a cumulative nature. Projects no longer considered or proposed include the Shelter/Harbor Island development project in Chula Vista, the Salt Pond Lands - Commercial/Residential development in the south end of the bay, an R.V. Park improvement project in Imperial Beach, and Caribe Isle hotel/commercial development. Projects that are in the vicinity of the bay, but with relatively little cumulative environmental effect, include the AT&SF Railroad yard improvements in Chula Vista and the Bayfront Bike Route improvement project, also in Chula Vista.

### MIDBAYFRONT PROJECT

The proposed project will result in a number of significant, unmitigated environmental impacts, as outlined in Tables 1-1-A and 1-2 of the Draft EIR that are considered either unmitigable or not mitigated at the plan level. These impacts (e.g., visual, biological, hydrological, land use, parks and traffic) when combined together would result in a cumulatively significant environmental effect on the Chula Vista bayfront environment. Alternatively, some environmental impacts which are not assessed as significant as a result of this project alone, contribute to the cumulative degradation of a resource along with other development in the region. Such impacts from the Midbayfront Project include the incremental contribution of the proposed action to the region's loss of agricultural lands, air quality impacts, water supply and regional demand for parkland. The project's contribution to regional conditions is therefore also addressed here. In summary, the following discussion addresses significant adverse impacts generated by this project that are cumulatively significant to the local environment, and environmental resource impacts considered significant when combined with other development projects and their associated impacts.

### Geology, Soils, Hydrology and Water Quality

In brief, the Midbayfront project will result in a number of impacts considered significant, but not mitigated at the plan-level EIR. These include effects related to geology and soils, hydrology and water quality, including but not limited to groundwater impacts due to

~~subterranean parking, urban surface runoff, siltation and chemical contamination to adjacent marshlands, and groundwater extraction for the proposed lagoon and potential contamination thereof due to existing groundwater conditions. These impacts may significantly affect or contribute to biological impacts and when combined with other project specific impacts identified below, will contribute to the cumulative effect of the project per CEOA Section 15355.~~

### **Visual/Aesthetic and Community Character**

~~The proposed project would result in a number of impacts which are either (1) significant and unmitigable; (2) significant and mitigable; or (3) adverse, not significant. When all of the project impacts are considered together, a potentially significant cumulative impact would result from the combination of these individual impacts. The proposed density of the project, including the high amount of site coverage and the excessive building heights, are the proposed project elements which are largely responsible for the potential individual and cumulative impacts at the site.~~

~~The cumulative impacts for relevant issue areas are discussed below.~~

#### **VISUAL AESTHETICS/COMMUNITY CHARACTER**

~~The cumulative aesthetic effects of the proposed project are discussed in this section from two perspectives: 1) what are the cumulative visual/aesthetic effects of the project from existing off-site public viewing locales? and 2) what are the long term potential effects to other bayside communities in the San Diego Region?~~

With respect to existing public views within and adjacent to the City of Chula Vista, the proposed project will significantly alter and dominate the image of the City. Most existing bayfront views are within 0.5 mile of the site and the character of most of these existing views will change from a predominantly natural open space quality to one of high density urban development. With the exception of "view windows" to the bay from "E" Street and "F" Street, the majority of other views to the bay within the City of Chula Vista will be lost. In addition, the natural open space views to the Sweetwater Marsh currently afforded from the Chula Vista Nature Interpretive Center will be altered to views dominated by high-rise development within a foreground (0.25 mile) distance zone.

While a number of existing public views will be lost, the proposed project will result in new views created onsite. Public views that will be created include those along Marina Parkway and from the public park areas west of Marina Parkway. In addition, public views would be created from high-rise buildings providing public services, such as restaurants. The public's access to these potential new views in large part will determine to what degree the loss of existing views will be mitigated. At present, a substantial number of Chula Vista residents experience the open space waterfront views from "E" Street and the I-5 interchange, as well as from public restaurants along Bay Boulevard. With the proposed project, the public's access to new public parks will be critical, as well as the provision of adequate parking. These issues are addressed further in Section 3.12. In summary, however, the proposed project is deficient in planned public parking space by more than 300

~~spaces. This parking condition would consequently limit the public's access to the project locations where beneficial public views will be centered. Consequently, while the project will create scenic new views to the bayfront, these beneficial effects are not considered sufficient to mitigate the loss of existing views.~~

The ~~A~~ second cumulative impact issue is whether the proposed project would have indirect effects on other community waterfront developments. As proposed, the LCPR No. 8 would allow buildings of greater height and density than any other San Diego County waterfront area, with the exception of downtown San Diego. The density and height of the proposed development will be visually prominent from a number of regional viewpoints, including Cabrillo National Monument, I-5, high-rise buildings in downtown San Diego and a number of locations in the City of Coronado, among others.

Because of ~~the~~ precedent setting nature of the proposed building heights and densities, other adjacent or nearby properties could be subsequently proposed for similar new developments or redevelopments if the project is approved. As the proposed LCPR No. 8 would potentially remove a barrier to other high-rise development by the City of Chula Vista or California Coastal Commission, the project could contribute to other long-term losses of public waterfront views in the San Diego Metropolitan region.

#### Air Quality

Cumulative impacts will result from the interaction of site mobile and stationary source emissions, as well as from site-related air emissions with the basin as a whole. The plume from any site sources such as a co-generation plant, however, will cover only a few feet in horizontal extent while mobile source emissions are distributed widely in space. Because the co-generation plant plume is hot and emitted from an elevated stack, it will not reach maximum ground-level concentrations until it is carried far from the project area. Any cumulative impacts from synergistic (auto plus on-site stationary source) emissions are negligible.

Regionally additive emissions from site traffic or stationary sources with the rest of the basin are evaluated in terms of planning consistency with the new regional air plan under development. The regional plan will incorporate the most recent version of the LCP for the Chula Vista bayfront, including any revisions likely to be adopted during the effective lifetime of the air quality plan. By virtue of incorporation of this proposed LCPR No. 8 (or any of the alternatives adopted as an amendment to the LCP) into the air plan currently being prepared, no adverse ~~regional cumulative~~ air quality impacts are predicted from ~~project implementation in conjunction with all anticipated other regional growth~~ implementation of the plan. However, a potential incremental contribution from vehicular sources to a regionally significant air quality impact would occur. Transportation Control Measures (TCMs) and temporary construction activity impact mitigation measures must be incorporated into the proposed project to mitigate the project's incremental contribution to the regionally significant air basin impact (see Section 3.5). In addition, potential cumulative impacts would occur from the vehicular emissions added to the co-generation plant emissions.

### Conversion of Agricultural Lands

The cumulative impact cited was as a result of elimination of approximately 45 to 65 acres of land potentially suitable for agricultural production. This impact at the project level is not considered significant, but when considered along with the amount of agricultural acreage lost at a regional scale, it is considered an incremental contribution to the larger, regionally significant impact.

### Biology

The development of the Midbayfront site would result in the loss of substantial enhancement and habitat expansion opportunities which occur in only a handful of locations in southern California. This lost opportunity would be considered to be significant and will continue to increase in significance as similar sites are lost due to development. Further, the proposed development is expected to restrict the enhancement potential of the wetland areas under federal management by creating a continual source of predators and other disturbance factors. These impacts have been previously identified as significant on an individual basis, however they are cumulative in nature in that continuing changes in land use of the region will result in further intensification of predator problems from both landward and bayward sources.

In a regional context, the proposed project would provide a precedent for high-rise or higher density development in the southbay region which could potentially result in similar development being initiated in other areas along the shoreline. Several areas where such development or redevelopment might occur could result in further wetlands encroachment and increased predator threats in adjacent sensitive habitats.

As examples, high-rise development within the National City, 24th Street industrial areas would pose threats similar to those identified for the proposed project upon the wetlands of the Paradise Creek Marsh and the recently created connector marsh and "D" Street Fill Marshes. Such development could seriously jeopardize the survival of the "D" Street Fill Least Tern Colony. Development of this nature within the Rohr Industries complex to the south of the Midbayfront would further restrict the potential of the "F" & "G" Street Marsh as a viable coastal wetland habitat. Proposed development of this type in the regions of southern Chula Vista, San Diego, or Imperial Beach could threaten the resources of the Western Salt Saltworks dikes and ponds and might result in serious impacts or even the loss of yet another Least Tern Colony, Belding's Savannah Sparrow populations, substantial avian roosting areas, and one of only two known nesting colonies known to exist worldwide for the Elegant Tern.

### Land Use

Cumulative project-related land use impacts include associated impacts cited to visual quality/community character and public access. All of these individual impacts are cited to be potentially significant, and, in the case of land use and visual quality/community character, are unmitigable. Cumulative impacts are thus also considered significant. Only

project redesign to reduce the density and heights would avoid the impact. Since redesign is not proposed, the impact remains significant.

### Transportation/Access

The traffic analysis was based on surrounding development occurring in the bayfront consistent with existing approved plans and SANDAG projections. However, if the project were is approved, other bayfront properties could be induced to also intensify existing or planned developments. Thus, cumulative traffic impacts could occur. The proposed project would create potentially significant and unmitigable traffic impacts. Cumulative surrounding development at higher than planned intensities could create significantly worse traffic impacts, potentially creating level-of-service F throughout the key area intersections. No feasible measures currently exist to mitigate these potential impacts.

## SUMMARY

### Regional Bayfront Cumulative Impacts

The 15+ projects proposed or approved for the South Bay and discussed in the regional overview, will collectively result in significant alteration to the bayfront environment. Although individual projects may reduce impacts to levels that are considered less than significant, impacts cannot be entirely mitigated or avoided.

An attempt to address impacts on a cumulative, regional scale has been initiated by the SDUPD. The South San Diego Bay Enhancement Plan (not adopted to date) addresses biological resources of the South Bay region and identifies areas that should be reserved and enhanced, as well as potential mitigation areas for cumulative impacts. Due to the increased urbanization of the South Bay region, and the limited possibilities (e.g., locations) for mitigation of habitat and species, any project of scale proposed in this region should be considered to contribute significantly to cumulative impacts.

When combined with numerous impacts of a similar type, the incremental contributions of the proposed project become significant for selected environmental resources.

### Midbayfront Project

As indicated in the previous text, the Midbayfront Project will generate a number of environmental effects that, when considered collectively, result in a significant cumulative effect to the environment. (Individual resource impacts may also be considered significant, and are addressed in the DEIR technical sections.)

The impacts anticipated to geology, soils, hydrology and water quality, visual/aesthetics and the community character, air quality, biological resources, land use, transportation/access and from conversion of agricultural lands to urban uses are considered cumulatively significant to the Midbayfront project site and/or contribute significantly to the impact of a resource in the region.

~~In summary, If this project were is approved, potential cumulative impacts could would result not only from two or more project area impacts but also from the considered together; or combination of the project impacts with other properties in the LCP area south bay region, also intensifying existing developments, or developing for the first time at a greater scale than what the existing LCP allows. In addition, the proposed project could encourage developments in the nearby region that are of greater height or intensity than currently allowed. In order to build or redevelop, these properties would be subject to CEQA, probably requiring an EIR for review of proposed plans. Thus, a mechanism exists to check and limit cumulative impacts; however, the potential exists for development and/or redevelopment at a greater scale than is presently allowed. Currently, no other projects are proposed in the LCP area which exceed the requirements of the existing, approved LCP.~~

## **10.0 CERTIFICATION OF ACCURACY AND QUALIFICATIONS**

This Environmental Impact Report was prepared by Keller Environmental Associates, Inc. of San Diego, California. Members of Keller Environmental Associates who contributed to the report are listed below.

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| Brian Shields                               |                               |
| View Point West                             | Visual Simulations            |
| Tony Kovacic                                |                               |
| Hans D. Giroux                              | Air Quality and Noise Studies |

I hereby affirm that, to the best of our knowledge, the statements and information contained herein are in all respects true and correct, and that all known information concerning the potentially significant environmental effects of the project have been included and fully evaluated in this EIR.

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Christine A. Keller  
Project Director



## **11.0 ORGANIZATIONS AND PERSONS CONTACTED**

California Coastal Commission. Deborah N. Lee, Assistant District Director, periodic communications.

California Department of Fish and Game. Teresa Stewart, Area Biologist, periodic communications.

Chula Vista, City of:

Engineering Department. Mr. Sam Roller, Assistant Civil Engineer. Meeting, November 29, 1989.

Finance Department. Mr. Lyman Christopher. Telephone communication, January, 1990.

Fire Department. Ms. Carol Gove, Fire Marshal. Written communication, June 30, 1989, February 6, 1990; telephone communications, June 27 and September 21, 1989.

Dyer, Jim. Written communication, February 5, 1990.

Lopez, Sam, Assistant Fire Chief. Written communication, February 9, 1990.

Parks and Recreation Department. Mr. Manuel A. Mollinedo, Director of Recreation. Written communication, August 16, 1989.

Ms. Shauna Stokes, Senior Administrative Analyst. Written communication, June 30, 1989; telephone communications, July 11 and August 2, 1989.

Mr. Jess Valenzuela, Director of Parks and Recreation. Written communication, February 22, 1991.

Community Development Department. Ms. Robin Putnam, Principal Community Development Specialist. Telephone communications, June, 1989 - June, 1990.

Planning Department. Mr. Doug Reid, Environmental Review Coordinator. Telephone and personal communications, June, 1989 - May, 1990.

Police Department. Mr. Keith Hawkins, Captain. Written communication, June 30, 1989; meeting, July 6, 1989; telephone communications, June 27, 1989, October 25, 1989, February 27, 1991.

Chula Vista City School District. Kate Shurson, Director of Planning. Telephone communication, October 20, 1989; January 1991.

Laidlaw Waste Systems. Mr. Ed Kaliri, Division Manager. Written communication, June 30, 1989; telephone communications, July 6 and July 24, 1989; January 1991.  
Metropolitan Water District. Jon Matusak, Senior Engineer, Resources Division. Telephone communication, June 26, 1989.

National City, City of:

Department of Planning. Mr. Douglas S. Mainland, Land Use Technician. Meeting, July 6 and July 24, 1989.

San Diego Association of Governments. Ms. Eunice Tanjuaquio, Information Specialist. Meeting, September 25, 1989.

San Diego, City of. Planning Department. Mr. Robert Brocato, Strategic Planning and Research. Meeting, August 17, 1989.

Mr. Howard Greenstein, Long Range Planner. Telephone communication, May 29, 1990.

San Diego, County of. Department of Public Works. Ms. Julie Quinn, Environmental Manager. Written communication, June 30, 1989; telephone communication, July 26, 1989.

San Diego Unified Port District. Mr. Frederick Trull, Director of Planning. Meeting, August, 1989.

San Diego Gas and Electric. Ms. Susan Scott, Service Planner. Written communication, June 30, 1989; meeting, July 14, 1989; telephone communications, June 27 and July 26, 1989.

Sweetwater Authority. Mr. Garry Butterfield, General Manager. Written communication, June 30, 1989; telephone communications, June 26 and July 11, 1989.

Mr. Joe Gray, Principal Engineering Specialist. Telephone communications, July 7 and December 7, 1989.

Sweetwater Union High School District. Mr. Thomas Silva, Director of Planning. Written communication, June 30, 1989; telephone communication, June 27, 1989.

The Jerde Partnership. Mr. Ralph Yanagawa, Architect. Telephone communications, July - October 1989, January 1991.

U.S. Fish and Wildlife Service.

Martin Kenney, Acting Office Supervisor Laguna Niguel, periodic communications.  
Mark Weitezel, Imperial Beach, periodic communications.  
Ron Ryno, Imperial Beach, periodic communications.

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